

AD-A100 557

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2  
20301A ASSAULT BREAKER, MISSILE NUMBER FTV-1, ROUND NUMBER V161--ETC(U)  
MAR 81

UNCLASSIFIED

ERADCOM/ASL-DR-1171

NL

1 of 1  
AD-A  
100557

END  
DATE  
FILED  
7-81  
DTIC

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

DR 1171  
March 81  
AD

12

AD A100557

METEOROLOGICAL DATA REPORT  
20301A Assault Breaker  
Missile No. FTV-1  
Round No. VIGI  
31 March 1981

by

White Sands Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

DTIC FILE COPY

ECOM  
UNITED STATES ARMY ELECTRONICS COMMAND

DTIC  
ELECTED  
JUN 24 1981  
S D

81 6 24 072

DISPOSITION INSTRUCTIONS

Destroy this report when it is no longer needed. Do not return to the originator.

DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

The citation of trade names and names of manufacturers in this report is not to be construed as official Government indorsement or approval of commercial products or services referenced herein.

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1171	2. GOVT ACCESSION NO. AD A100 530	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 20301A Assault Breaker Missile Number FTV-1 Round Number VIGI	5. TYPE OF REPORT & PERIOD COVERED	
7. AUTHOR(s) White Sands Meteorological Team	6. PERFORMING ORG. REPORT NUMBER DA Task 1F665702D127402	
9. PERFORMING ORGANIZATION NAME AND ADDRESS /	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS /	
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002	12. REPORT DATE 11 March 1981	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Cmd Adelphi, MD 20783	13. NUMBER OF PAGES 46	
16. DISTRIBUTION STATEMENT (of this Report)  DISTRIBUTION STATEMENT A Approved for public release; Distribution Unlimited	15. SECURITY CLASS. (of this report) UNCLASSIFIED	
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)  Approved for public release; distribution unlimited.	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
18. SUPPLEMENTARY NOTES	Accession For NTIS GRA&I <input checked="" type="checkbox"/> DTIC TAB <input type="checkbox"/> Unannounced <input type="checkbox"/> Justification	
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)	By _____ Distribution/ _____ Availability Codes _____ Dist Avail and/or Special A	
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  Meteorological data gathered for the launching of the 20301A Assault Breaker, Missile Number FTV-1, Round Number VIGI, presented in tabular form.		

## CONTENTS

INTRODUCTION-----	1
DISCUSSION-----	1
MAP-----	2
TABLES:	
1. Surface Observation taken at 0918 MST at LC-33-----	3
2. Surface Observation taken at 0842, 0912 and 0942 MST at Jallen Site-----	4
3. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, taken at 0918 MST-----	5
3a. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 0918 MST-----	5
4. LC-33 Pilot-Balloon-Measured Wind Data at 0908 MST-----	6
5. LC-33 Pilot-Balloon-Measured Wind Data at 0918 MST-----	7
6. WSD Significant Level Data at 0918 MST-----	8
7. WSD Upper Air Data at 0918 MST-----	10
8. WSD Mandatory Levels at 0918 MST-----	16
9. LC-37 Significant Level Data at 0755 MST-----	17
10. LC-37 Upper Air Data at 0755 MST-----	19
11. LC-37 Mandatory Levels at 0755 MST-----	25
12. HMN Significant Level Data at 0655 MST-----	26
13. HMN Upper Air Data at 0655 MST-----	27
14. HMN Mandatory Levels at 0655 MST-----	
15. Jal Significant Level Data at 0655 MST-----	
16. Jal Upper Air Data at 0655 MST-----	34
17. Jal Mandatory Levels at 0655 MST-----	36
18. Jal Significant Level Data at 0918 MST-----	37
19. Jal Mandatory Levels at 0918 MST-----	38
levels at 0918 MST-----	42

## INTRODUCTION

20301A Assault Breaker, Missile Number FTV-1, Round Number V1G1, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0918 on 31 March 1981. The scheduled launch time was 0855.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations at the launch site. Temperature ( $^{\circ}$ C), relative humidity, dew point, wind direction and speed, and cloud cover were recorded at the launch site at T-0 minutes.

Wind direction from one anemometer was

for . . .

Low level wind data were obtained from Single Theodolite hot balloon observations at:

#### SITE AND ALTITUDE

LC-33 1260 Meters and 660 Meters.

(b) Air structure data (rawinsonde) were collected at the following met sites. Data were collected from surface to as high as possible in 500-foot increments.

#### SITE AND TIME

WSD	0918
LC-37	0755
HMN	0655
Jal	0655
Jal	0918

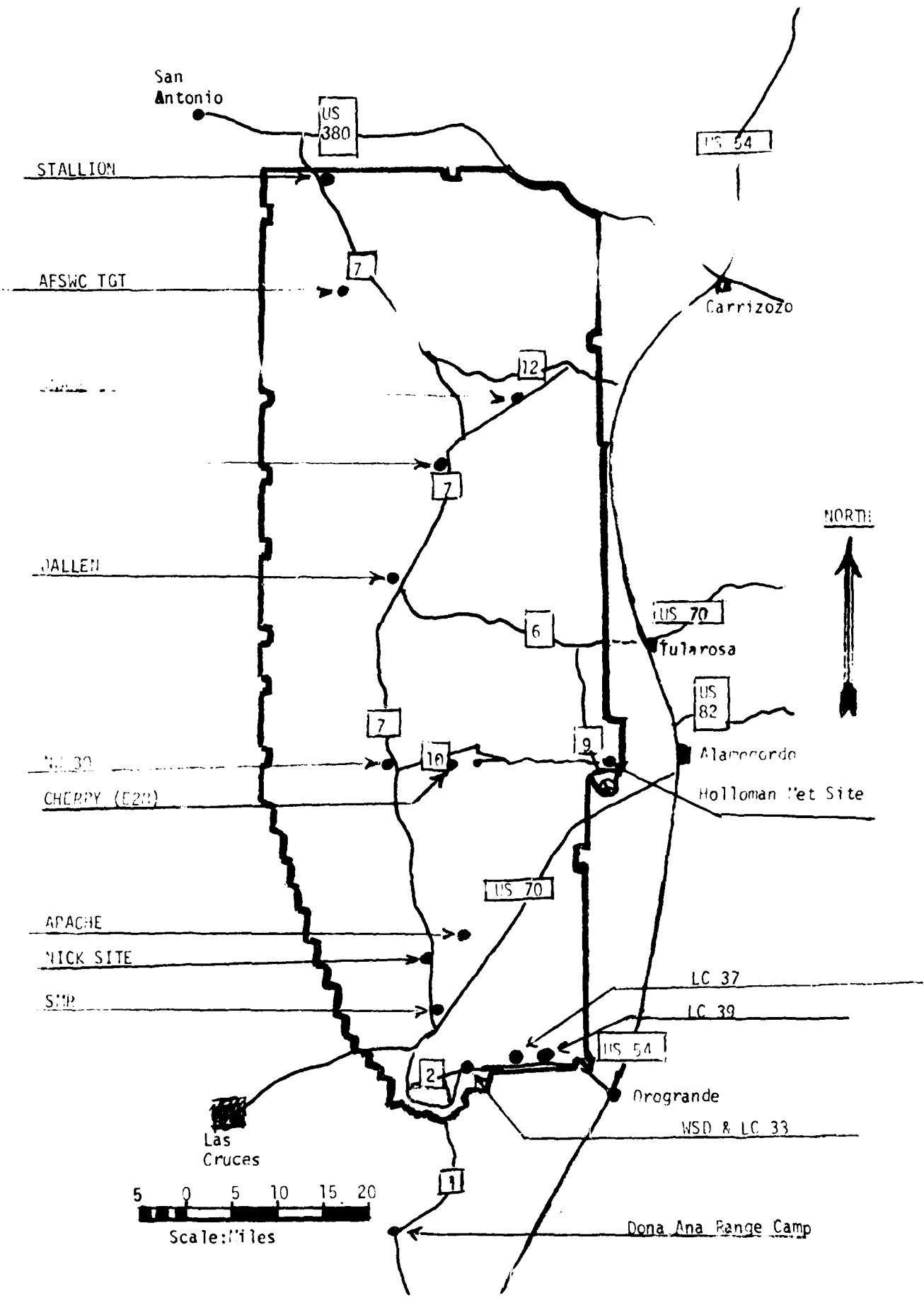


TABLE 1. Surface Observations taken at 0918 MST,  
31 March 1981, at LC-33 (E&A) 20301A  
Assault Breaker, Missile Number FTV-1,  
Round Number V1G1.

ELEVATION	3983	FT/MSL
PRESSURE	882.4	MB
TEMPERATURE	16	°C
RELATIVE HUMIDITY	31	
DEW POINT	-01	°C
DENSITY	1.059	GM/M <sup>3</sup>
WIND SPEED	12	KTS
WIND DIRECTION	015	DEGREES
CLOUD COVER	CLEAR	

PROJECT SURFACE OBSERVATION

TABLE 2

DATE		MARCH		1981	
DAY	MONTH	YEAR	YEAR	MONTH	DAY
31					
TIME	TIME	PRESSURE	TEMPERATURE	DEW POINT	RELATIVE
MM:SS	MM:SS	mb	°C	°C	HUMIDITY
					%
0842	0842	879.5	13.5	-13.2	14
0912	0912	879.6	13.9	-10.9	17
0942	0942	879.8	15.1	-11.3	15

## JALLEN STATION

STATION	JALLEN
$X = 450,491.60$	$Y = 464,023.05$
$H = 4053.00$	

YEAR MONTH DAY

4

## PSYCHOMETRIC COMPUTATION

TIME:	0842	0912	0942
DRY BULB TEMP.	13.5	13.9	15.1
WET BULB TEMP.	03.5	04.1	04.6
WET BULB DEPR.	10.0	09.8	10.5
DEW POINT	-13.2	-10.9	-11.3
RELATIVE HUMID.	14	17	15

**DELAS-MS-MT-WS FORM 12**  
01 NOV 1980

Supersedes ANSEL-8L-INT-WS Form 12, 28 Aug 72  
and all project surface observation forms, except DIVAD Surface Observation for.

Supersedes ANSEL-8L-INT-WS Form 12, 28 Aug 72  
and all project surface observation forms, except DIVAD Surface Observation for.

TABLE 3 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	017	14	-30	022	12	-30	026	15
-20	027	14	-20	011	10	-20	035	15
-10	013	14	-10	027	09	-10	029	15
0.0	028	12	0.0	018	09	0.0	027	16
+10	036	09	+10	025	08	+10	033	14

TABLE 3a LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	027	11	-30	030	15
-20	021	09	-20	038	15
-10	019	10	-10	012	15
0.0	015	12	0.0	015	13
+10	009	12	+10	018	14

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	022	09	-30	016	12
-20	M	11	-20	010	13
-10	018	09	-10	010	12
0.0	024	09	0.0	018	12
+10	008	11	+10	015	14

## PILOT BALLOON MEASURED WIND DATA

TABLE 4RELEASED FROM LC-33 DATE 31 March 1981 TIME 0908 MSTCOORDINATES (WSTM) X= 486.037.24 Y= 183.350.16 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO  
 HEIGHTS ARE METERS AGL X OR FEET AGL .

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
sfc	015	11
60	014	12
120	013	12
180	013	13
240	012	12
300	012	13
360	010	14
420	360	12
480	349	12
540	336	11
600	324	12
660	313	12
720	305	14
780	298	15
840	292	16
900	288	18
960	284	20
1020	280	20
1080	276	19
1140	272	18
1200	268	18
1260	263	18
1320		
1380		
1440		
1500		
1560		
1620		
1680		
1740		
1800		
1860		
1920		
1980		
2040		
2100		
2160		
2220		
2280		
2340		
2400		
2460		
2520		
2580		
2640		
2700		
2760		
2820		
2880		
2940		
3000		
3060		
3120		
3180		
3240		
3300		
3360		
3420		
3480		
3540		
3600		
3660		
3720		
3780		
3840		
3900		
3960		
4020		
4080		
4140		
4200		
4260		
4320		
4380		
4440		
4500		
4560		
4620		
4680		
4740		
4800		
4860		
4920		
4980		
5040		
5100		
5160		
5220		
5280		
5340		
5400		
5460		
5520		
5580		
5640		
5700		
5760		
5820		
5880		
5940		
6000		
6060		
6120		
6180		
6240		
6300		
6360		
6420		
6480		
6540		
6600		
6660		
6720		
6780		
6840		
6900		
6960		
7020		
7080		
7140		
7200		
7260		
7320		
7380		
7440		
7500		
7560		
7620		
7680		
7740		
7800		
7860		
7920		
7980		
8040		
8100		
8160		
8220		
8280		
8340		
8400		
8460		
8520		
8580		
8640		
8700		
8760		
8820		
8880		
8940		
9000		
9060		
9120		
9180		
9240		
9300		
9360		
9420		
9480		
9540		
9600		
9660		
9720		
9780		
9840		
9900		
9960		
10020		
10080		
10140		
10200		
10260		
10320		
10380		
10440		
10500		
10560		
10620		
10680		
10740		
10800		
10860		
10920		
10980		
11040		
11100		
11160		
11220		
11280		
11340		
11400		
11460		
11520		
11580		
11640		
11700		
11760		
11820		
11880		
11940		
12000		
12060		
12120		
12180		
12240		
12300		
12360		
12420		
12480		
12540		
12600		
12660		
12720		
12780		
12840		
12900		
12960		
13020		
13080		
13140		
13200		
13260		
13320		
13380		
13440		
13500		
13560		
13620		
13680		
13740		
13800		
13860		
13920		
13980		
14040		
14100		
14160		
14220		
14280		
14340		
14400		
14460		
14520		
14580		
14640		
14700		
14760		
14820		
14880		
14940		
15000		
15060		
15120		
15180		
15240		
15300		
15360		
15420		
15480		
15540		
15600		
15660		
15720		
15780		
15840		
15900		
15960		
16020		
16080		
16140		
16200		
16260		
16320		
16380		
16440		
16500		
16560		
16620		
16680		
16740		
16800		
16860		
16920		
16980		
17040		
17100		
17160		
17220		
17280		
17340		
17400		
17460		
17520		
17580		
17640		
17700		
17760		
17820		
17880		
17940		
18000		
18060		
18120		
18180		
18240		
18300		
18360		
18420		
18480		
18540		
18600		
18660		
18720		
18780		
18840		
18900		
18960		
19020		
19080		
19140		
19200		
19260		
19320		
19380		
19440		
19500		
19560		
19620		
19680		
19740		
19800		
19860		
19920		
19980		
20040		
20100		
20160		
20220		
20280		
20340		
20400		
20460		
20520		
20580		
20640		
20700		
20760		
20820		
20880		
20940		
21000		
21060		
21120		
21180		
21240		
21300		
21360		
21420		
21480		
21540		
21600		
21660		
21720		
21780		
21840		
21900		
21960		
22020		
22080		
22140		
22200		
22260		
22320		
22380		
22440		
22500		
22560		
22620		
22680		
22740		
22800		
22860		
22920		
22980		
23040		
23100		
23160		
23220		
23280		
23340		
23400		
23460		
23520		
23580		
23640		
23700		
23760		
23820		
23880		
23940		
24000		
24060		
24120		
24180		
24240		
24300		
24360		
24420		
24480		
24540		
24600		
24660		
24720		
24780		
24840		
24900		
24960		
25020		
25080		
25140		
25200		
25260		
25320		
25380		
25440		
25500		
25560		
25620		
25680		
25740		
25800		
25860		
25920		
25980		
26040		
26100		
26160		
26220		
26280		
26340		
26400		
26460		
26520		
26580		
26640		
26700		
26760		
26820		
26880		
26940		
27000		
27060		
27120		
27180		
27240		
27300		
27360		
27420		
27480		
27540		
27600		
27660		
27720		
27780		
27840		
27900		
27960		
28020		
28080		
28140		
28200		
28260		
28320		
28380		
28440		
28500		
28560		
28620		
28680		
28740		
28800		
28860		
28920		
28980		
29040		
29100		
29160		
29220		
29280		
29340	</	

### PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-33

DATE 31 March 1981

TIME 0918 MST

COORDINATES (WSTM)    X = 486,037.24    Y = 186,350.16    H = 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO  
HEIGHTS ARE METERS AGL X OR FEET AGL       .

STATION ALTITUDE 3989.00 FEET MSL  
 31 MAR. 61 0918 HRS MST  
 ASCENSION NO. 214

SIGNIFICANT LEVEL DATA  
 0900020214  
 WHITE SANDS  
 TABLE 6

GEODETIC COORDINATES  
 32°40.043' LAT DEG  
 106.37031' LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
882.0	3989.0	16.0	-4.0	25.0
865.4	4515.3	12.6	-5.4	28.0
850.0	5009.1	11.9	-5.1	30.0
836.2	5458.2	11.2	-5.3	31.0
759.8	8055.3	5.0	-8.8	36.0
723.0	9379.2	2.3	-17.2	22.0
700.0	10232.9	-2	-20.4	20.0
678.0	11071.7	-6	-22.6	17.0
500.0	18916.6	-17.5	-37.2	16.0
458.4	20941.0	-21.6	-40.6	16.0
436.8	22103.0	-25.0	-40.9	21.0
408.4	23702.0	-27.7	-44.6	18.0
400.0	24192.3	-29.0	-45.7	18.0
381.2	25317.5	-32.3	-48.0	19.0
374.6	25722.0	-33.4	-49.0	19.0
323.8	29025.0	-42.7		
300.0	30708.5	-46.2		
250.0	34619.3	-55.3		
235.4	35880.2	-56.6		
210.8	38169.4	-59.8		
200.0	39251.5	-60.1		
179.8	41459.9	-56.4		
163.4	43466.3	-55.3		
150.0	45261.7	-56.4		
144.2	46088.6	-55.6		
137.2	47131.7	-56.6		
126.6	48810.0	-57.5		
116.8	50478.8	-60.0		
110.4	51641.8	-59.1		
100.0	53681.6	-60.5		
95.4	54649.9	-60.3		
63.6	62965.2	-61.8		
61.0	63824.0	-59.1		
56.0	65593.8	-59.4		
50.0	67948.2	-57.5		
46.2	69601.4	-56.6		
43.8	70730.9	-52.2		
41.2	72056.6	-53.3		
36.2	74808.9	-50.4		
31.2	78006.3	-51.7		

STATION ALTITUDE 3489.00 FEET MSL  
31 MAR. 81 0918 HRS MST  
ASCENSION NO. 214

SIGNIFICANT LEVEL DATA

09000,0214

WHITE SANDS

TABLE 6 cont'

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPONT DEGREES CENTIGRAPH	REL.HUM. PERCENT
30.0	78849.4	-50.8	
26.0	61958.7	-47.0	
23.6	84087.0	-45.8	
20.0	87769.3	-41.5	
15.2	93995.0	-37.0	
10.0	103604.4	-36.4	
9.6	104543.5	-36.1	

STATION ALTITUDE 3489.00 FEET MSL  
1 MAR. 81 091A HRS MST  
AIRCRAFT NO. <14

UPPER AIR DATA  
0900020214  
WHITE SANDS  
TABLE 7

ALTC ft	PRESSURE INCHES MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIREC TIO N DEGREES (IN)	WIND DATA KNOTS	INDEX OF REFRACTION
1069.0	882.0	16.0	-4.0	25.0	1060.6	663.1	30.0	8.9
1100.0	881.6	15.9	-4.0	25.1	1060.4	663.0	29.3	8.9
1100.0	865.9	12.7	-5.4	27.9	1053.4	659.3	358.4	9.3
1100.0	850.3	11.9	-5.1	30.0	1037.2	658.4	336.2	11.8
1100.0	834.9	11.1	-5.3	31.1	1021.3	657.4	322.9	15.5
1100.0	819.7	9.9	-6.0	32.0	1007.0	656.0	310.0	17.8
1100.0	804.7	8.7	-6.6	33.0	992.8	654.6	298.9	20.3
1100.0	790.0	7.5	-7.3	34.0	974.8	653.2	291.5	22.2
1100.0	775.5	6.3	-8.0	34.9	965.1	651.8	285.4	23.5
1100.0	761.4	5.1	-8.7	35.9	951.6	650.4	281.4	25.2
1100.0	747.2	4.1	-11.4	31.3	937.7	649.1	279.9	27.5
1100.0	733.4	3.1	-14.5	26.0	925.9	647.8	278.2	29.6
1100.0	719.7	1.9	-17.6	21.7	910.7	646.4	276.0	31.5
1100.0	706.2	.5	-19.5	20.5	899.5	644.7	275.5	32.9
1100.0	692.9	-3.3	-21.1	19.0	884.2	643.7	275.4	32.8
1100.0	679.9	-6.6	-22.4	17.3	868.4	643.4	274.6	32.9
1100.0	666.7	-1.5	-23.4	16.9	854.6	642.2	274.7	33.5
1100.0	653.7	-2.6	-24.3	16.9	841.4	640.9	274.1	34.3
1100.0	641.0	-3.7	-25.3	16.8	828.4	639.6	271.6	36.1
1100.0	628.5	-4.8	-26.2	16.8	815.6	638.3	269.9	37.6
1100.0	616.3	-5.9	-27.1	16.7	803.0	637.0	269.5	38.6
1100.0	603.3	-7.0	-28.1	16.6	790.6	635.7	267.6	38.0
1100.0	590.5	-8.1	-29.0	16.6	778.4	634.4	265.6	36.8
1100.0	577.0	-9.2	-30.0	16.5	766.5	633.1	262.3	35.1
1100.0	564.4	-10.3	-30.9	16.4	754.7	631.8	261.0	35.7
1100.0	551.4	-11.4	-31.9	16.4	743.1	630.4	262.6	37.4
1100.0	538.4	-12.4	-32.8	16.3	731.7	629.1	262.5	39.6
1100.0	525.5	-13.5	-33.7	16.2	720.5	627.8	262.4	40.4
1100.0	512.6	-14.6	-34.7	16.2	709.4	626.5	262.1	39.9
1100.0	500.4	-15.7	-35.6	16.1	698.6	625.1	261.4	42.2
1100.0	487.4	-16.8	-36.6	16.0	687.9	623.8	260.6	45.1
1100.0	474.4	-17.9	-37.5	16.0	677.1	622.5	259.0	47.3
1100.0	461.5	-18.8	-38.3	16.0	665.9	621.3	259.6	48.0
1100.0	448.5	-19.8	-39.1	16.0	654.9	620.2	259.5	46.8
1100.0	435.5	-20.7	-39.9	16.0	644.1	619.7	258.6	45.2
1100.0	422.5	-21.8	-40.6	16.3	635.6	617.7	257.9	43.7
1100.0	409.5	-22.9	-40.6	18.4	624.2	615.9	257.6	44.4
1100.0	396.5	-23.7	-40.8	20.6	615.0	614.1	257.3	45.8
1100.0	383.5	-24.7	-41.8	20.3	604.6	612.9	257.0	48.3
1100.0	370.5	-25.0	-43.0	19.3	594.1	611.9	257.0	51.0

STATION COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

STATION ALTITUDE 3989.00 FT 1  
31 MAR. 81 091A HRS N.Y.  
ASSEMBLION NO. 214

UPPER AIR DATA  
0900020214  
WHITE SANDS

TABLE 7 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEG. DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES RELATIVENESS KNOTS	INDEX OF REFRACTION
23500.0	411.9	-27.4	74.4	583.7	610.8	257.1	54.0
24000.0	405.3	-28.5	74.5	574.2	609.4	257.2	56.6
24500.0	394.8	-29.9	74.3	565.3	607.6	257.4	59.0
25000.0	380.4	-31.4	74.7	556.7	605.8	257.1	60.4
25500.0	376.2	-32.8	74.0	548.1	604.0	256.1	60.6
26000.0	370.0	-34.2	74.4	539.4	602.2	254.9	60.6
26500.0	362.0	-35.6	73.1	530.8	600.5	253.4	60.3
27000.0	354.1	-37.0	73.6	522.3	598.7	252.9	60.3
27500.0	346.3	-38.4	73.9	514.0	596.9	253.2	60.7
28000.0	338.8	-39.8	73.5	505.8	595.1	253.0	61.1
28500.0	331.4	-41.2	73.3	497.8	593.3	254.1	61.5
29000.0	324.2	-42.6	73.8	489.9	591.5	253.3	61.7
29500.0	316.9	-43.7	74.1	481.1	590.1	252.1	61.8
30000.0	309.8	-44.7	74.5	472.5	588.8	250.4	61.4
30500.0	302.0	-45.8	74.0	464.0	587.5	248.7	61.1
31000.0	294.0	-46.9	74.6	455.6	586.0	247.7	60.9
31500.0	289.1	-48.0	74.7	447.4	584.5	247.4	61.7
32000.0	282.5	-49.2	74.9	439.4	583.0	247.1	64.9
32500.0	276.0	-50.4	75.1	431.5	581.5	247.6	68.6
33000.0	269.6	-51.5	75.3	423.8	580.0	248.2	72.7
33500.0	263.4	-52.7	75.4	416.2	578.4	248.2	72.0
34000.0	257.3	-53.9	75.5	408.8	576.9	248.0	70.0
34500.0	251.4	-55.0	75.6	401.5	575.4	247.5	65.0
35000.0	245.5	-55.7	75.3	393.3	574.5	246.5	60.6
35500.0	239.7	-56.2	74.9	384.9	573.8	246.4	61.3
36000.0	234.0	-56.8	75.8	376.8	573.1	247.3	63.3
36500.0	228.5	-57.5	76.0	364.0	572.1	248.9	74.0
37000.0	223.0	-58.2	76.4	351.4	571.2	250.2	84.9
37500.0	217.7	-58.9	76.4	341.4	570.3	251.1	96.2
38000.0	212.5	-59.6	76.6	331.6	569.4	251.5	103.9
38500.0	207.4	-59.9	76.9	321.9	568.9	251.2	102.1
39000.0	202.5	-60.0	77.0	311.4	568.7	250.1	94.4
39500.0	197.6	-59.7	76.5	301.4	569.2	247.2	76.8
40000.0	192.9	-58.8	76.1	291.4	570.3	243.1	60.2
40500.0	188.3	-58.0	75.6	281.4	571.4	236.0	45.3
41000.0	183.8	-57.2	74.7	271.9	572.5	234.0	40.4
41500.0	179.5	-56.4	74.0	261.4	573.6	240.0	48.4
42000.0	175.2	-56.1	73.7	251.4	573.9	245.7	62.7
42500.0	171.1	-55.8	74.3	241.4	574.3	250.4	82.9
43000.0	167.1	-55.6	74.7	231.4	574.7	252.7	95.9

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
 31 MAR. 81 0918 HRS MST  
 ASCENSION NO. <14

UPPER AIR DATA

0900020214  
 WHITE SANDS

GEODETIC COORDINATES  
 32°49.043 LAT DEG  
 106.37033 LON DEG

TABLE 7 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPPOINT PERCENT	REL.HUM. GM/CUBIC METER	SPPFD (UT)	DATA (UT)	INDEX OF REFRACTION
43500.0	163.1	-55.3		260.9	575.0	250.0	1.000058
44000.0	159.3	-55.6		255.1	574.6	250.0	1.000057
44500.0	155.5	-55.9		249.5	574.2	250.0	1.000056
45000.0	151.9	-56.2		243.9	573.8	250.0	1.000054
45500.0	148.3	-56.2		238.1	573.9	250.0	1.000053
46000.0	144.8	-55.7		232.0	574.5	250.0	1.000052
46500.0	141.4	-56.0		226.8	574.1	250.0	1.000051
47000.0	138.1	-56.5		222.0	573.5	250.0	1.000049
47500.0	134.8	-56.8		217.1	573.0	250.0	1.000048
48000.0	131.6	-57.1		212.2	572.7	250.0	1.000047
48500.0	128.5	-57.3		207.4	572.3	250.0	1.000046
49000.0	125.4	-57.8		202.9	571.7	250.0	1.000045
49500.0	122.5	-58.5		198.8	570.7	250.0	1.000044
50000.0	119.5	-59.3		194.7	569.7	250.0	1.000043
50500.0	116.7	-60.0		190.7	568.8	250.0	1.000042
51000.0	113.9	-59.6		185.8	569.3	250.0	1.000041
51500.0	111.2	-59.2		181.0	569.8	250.0	1.000040
52000.0	108.5	-59.3		176.8	569.6	250.0	1.000039
52500.0	105.9	-59.7		172.8	569.2	250.0	1.000038
53000.0	103.4	-60.0		169.0	568.7	250.0	1.000037
53500.0	100.9	-60.4		165.2	568.3	250.0	1.000036
54000.0	98.5	-60.4		161.3	568.2	250.0	1.000035
54500.0	96.1	-60.5		157.3	568.3	250.0	1.000034
55000.0	93.8	-60.4		153.5	568.3	250.0	1.000033
55500.0	91.5	-60.5		149.9	568.2	250.0	1.000032
56000.0	89.3	-60.5		146.4	568.0	240.4	1.000031
56500.0	87.2	-60.6		142.9	567.9	239.9	1.000030
57000.0	85.1	-60.7		139.5	567.8	239.9	1.000029
57500.0	83.0	-60.8		136.2	567.7	239.9	1.000028
58000.0	81.0	-60.9		133.0	567.6	240.4	1.000027
58500.0	79.1	-61.0		129.8	567.4	241.1	1.000026
59000.0	77.2	-61.1		126.8	567.5	241.4	1.000025
59500.0	75.3	-61.2		123.8	567.2	241.1	1.000024
60000.0	73.5	-61.3		120.8	567.1	240.9	1.000023
60500.0	71.7	-61.4		117.0	567.0	240.1	1.000022
61000.0	70.0	-61.4		115.2	566.8	240.0	1.000021
61500.0	68.3	-61.5		112.5	566.7	240.0	1.000020
62000.0	66.7	-61.6		109.8	566.6	240.5	1.000019
62500.0	65.1	-61.7		107.2	566.5	239.9	1.000018
63000.0	63.5	-61.7		104.6	566.5	238.7	1.000017

STATION ALTITUDE 3489.00 FEET MSL  
 31 MAR. 61 0918 HRS MST  
 ASCENSION NO. 214

UPPER AIR DATA  
 0900020214  
 WHITE SANDS  
 TABLE 7 cont'

GEODETIC COORDINATES  
 32°40.043 LAT UEG  
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TIN)	WIND SPEED KNOTS	INDEX OF REFRACTION
6350.0	62.0	-60.1	101.3	568.6	237.0	32.4	1.000023	
6400.0	60.5	-59.1	98.4	569.9	233.9	29.1	1.000022	
6450.0	59.0	-59.2	96.1	569.8	230.1	26.2	1.000021	
6500.0	57.6	-59.3	93.9	569.7	225.5	23.6	1.000021	
6550.0	56.3	-59.4	91.7	569.6	220.7	21.7	1.000020	
6600.0	54.9	-59.1	89.4	570.0	215.0	19.9	1.000020	
6650.0	53.6	-58.7	87.1	570.5	212.3	16.1	1.000019	
6700.0	52.3	-58.3	84.8	571.1	208.4	12.2	1.000019	
6750.0	51.1	-57.9	82.7	571.6	213.7	9.0	1.000018	
6800.0	49.9	-57.5	80.6	572.1	230.9	6.5	1.000018	
6850.0	48.7	-57.2	78.6	572.5	255.0	6.8	1.000017	
6900.0	47.5	-56.9	76.6	572.9	266.0	9.8	1.000017	
6950.0	46.4	-56.7	74.7	573.2	270.6	13.0	1.000017	
7000.0	45.3	-55.0	72.4	575.3	270.6	16.1	1.000016	
7050.0	44.3	-53.1	70.1	577.9	270.6	19.1	1.000016	
7100.0	43.3	-52.4	68.3	578.8	269.6	21.2	1.000015	
7150.0	42.2	-52.8	66.8	578.2	269.1	23.2	1.000015	
7200.0	41.3	-53.3	65.4	577.7	267.4	24.4	1.000015	
7250.0	40.3	-52.8	63.7	578.3	265.1	25.2	1.000014	
7300.0	39.4	-52.3	62.1	579.0	263.4	24.5	1.000014	
7350.0	38.5	-51.6	60.6	579.6	262.1	20.7	1.000013	
7400.0	37.6	-51.2	59.0	580.3	260.3	16.9	1.000013	
7450.0	36.7	-50.7	57.5	581.0	258.4	12.3	1.000013	
7500.0	40.3	-52.8	56.1	581.3	254.2	7.6	1.000013	
7550.0	35.9	-50.5	54.9	581.1	240.9	5.8	1.000012	
7600.0	35.1	-50.7	53.7	580.8	153.9	1.7	1.000012	
7650.0	34.3	-50.9	52.5	580.5	102.6	5.0	1.000012	
7700.0	32.7	-51.3	51.3	580.3	91.3	9.2	1.000011	
7750.0	31.9	-51.5	50.2	580.0	67.0	13.4	1.000011	
7800.0	31.2	-51.7	49.1	579.7	88.4	12.7	1.000011	
7850.0	30.5	-50.9	47.9	580.4	90.4	11.6	1.000011	
7900.0	29.8	-51.2	46.6	581.2	95.4	9.5	1.000010	
7950.0	29.1	-50.0	45.5	582.0	108.5	6.5	1.000010	
8000.0	28.5	-49.4	44.3	582.8	137.5	4.4	1.000010	
8050.0	27.8	-48.8	43.2	583.5	154.3	4.1	1.000010	
8100.0	27.2	-48.2	42.1	584.3	171.7	4.1	1.000009	
8150.0	26.6	-47.6	41.0	585.1	186.6	4.5	1.000009	
8200.0	26.0	-47.0	40.0	585.9	198.4	5.1	1.000009	
8250.0	25.4	-46.7	39.0	586.3	207.3	5.9	1.000009	
8300.0	24.8	-46.4	38.1	586.6	216.6	7.3	1.000008	

STATION ALTITUDE 3989.00 FEET MSL  
 31 MAR. 61 0918 HRS MST  
 ASCENSION NO. 214

UPPER AIR DATA  
 0900020214  
 WHITE SANDS  
 TABLE 7 cont!

GEOMETRIC PRESSURE ALITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF WIND KNOTS	WIND DATA DIRECTION DEGREES (TIN)	INDEX OF REFRACTION
83500.0	24.2	-46.1	37.2	5a7.0	2a3.3
84000.0	23.7	-45.8	36.3	5a7.3	2a8.4
84500.0	23.2	-45.5	35.4	5a8.0	2a2.9
85000.0	22.7	-44.7	34.5	5a8.8	2a6.3
85500.0	22.1	-44.1	33.7	5a9.5	2a8.9
86000.0	21.7	-43.6	32.9	5a0.3	2a1.0
86500.0	21.2	-43.0	32.0	5a1.0	2a2.5
87000.0	20.7	-42.4	31.3	5a1.8	2a3.1
87500.0	20.2	-41.8	30.5	5a2.5	2a3.6
88000.0	19.8	-41.3	29.8	5a3.2	2a3.6
88500.0	19.4	-41.0	29.1	5a3.6	2a3.2
89000.0	18.9	-40.6	28.4	5a4.1	2a2.7
89500.0	18.5	-40.2	27.7	5a4.5	2a2.3
90000.0	18.1	-39.9	27.1	5a5.0	2a1.9
90500.0	17.7	-39.5	26.4	5a5.5	2a2.0
91000.0	17.3	-39.2	25.8	5a6.9	2a2.9
91500.0	17.0	-38.8	25.2	5a6.4	2a3.4
92000.0	16.6	-38.4	24.6	5a6.8	2a4.0
92500.0	16.2	-38.1	24.1	5a7.3	2a3.4
93000.0	15.9	-37.7	23.5	5a7.8	2a2.5
93500.0	15.5	-37.4	23.0	5a8.2	2a5.7
94000.0	15.2	-37.0	22.4	5a8.7	2a3.8
94500.0	14.9	-37.0	21.9	5a8.7	2a6.0
95000.0	14.5	-36.9	21.5	5a8.8	2a5.5
95500.0	14.2	-36.9	21.0	5a8.8	2a2.0
96000.0	13.9	-36.9	20.5	5a8.8	2a1.1
96500.0	13.6	-36.8	20.1	5a8.9	2a0.6
97000.0	13.3	-36.8	19.7	5a8.9	6a9.4
97500.0	13.0	-36.8	19.2	5a8.9	6a9.3
98000.0	12.8	-36.7	18.8	5a9.0	7a8.7
98500.0	12.5	-36.7	18.4	5a9.0	2a1.3
99000.0	12.2	-36.7	18.1	5a9.1	2a0.0
99500.0	12.0	-36.7	17.6	5a9.1	2a8.9
100000.0	11.7	-36.6	17.2	5a9.1	2a8.3
100500.0	11.4	-36.6	16.9	5a9.2	2a7.0
101000.0	11.2	-36.6	16.5	5a9.2	2a2.8
101500.0	11.0	-36.5	16.1	5a9.3	31.9
102000.0	10.7	-36.5	15.8	5a9.3	30.7
102500.0	10.5	-36.5	15.4	5a9.3	30.3
103000.0	10.3	-36.4	15.1	5a9.4	30.3

GEODETIC COORDINATES  
 32°40'04.3 LAT DEG  
 106.37033 LON DEG

STATION ALTITUDE 3989.00 FEET MSL  
31 MAR. 81 0918 HRS MST  
ASCENSION NO. 214

UPPER AIR DATA  
0900020214  
WHITE SANDS

GEODETIC COORDINATES  
32°40.041 LAT DEG  
106°37.031 LON DEG

TABLE 7 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEW-POINT DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER	WIND DATA DIRECTION DEGREES (TRUE)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
103500.0	10.0	-36.4	14.8	509.4	14.8	509.4	1.00003
104000.0	9.8	-36.3	14.5	509.6	14.5	509.6	1.00003
104500.0	9.6	-36.1	14.1	509.8	14.1	509.8	1.00003

STATION ALTITUDE 3989.00 FEET MSL  
 31 MAR. 81 0918 LRS MST  
 ASLENSION 1.0. <14

MANDATORY LEVELS  
 0300020214  
 WHITE CANUS  
 TABLE 8

LODGETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FLAT	TEMPERATURE		WFI. MIN. PERCENT	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS
		AIR DEGREES	DEWPNT CENTIGRADE			
850.0	5005.	11.9	-5.1	30.	336.0	11.9
800.0	6660.	8.3	-6.8	33.	295.9	21.3
750.0	8395.	4.3	-10.8	32.	280.2	27.0
700.0	10225.	-2.2	-20.4	20.	275.3	32.9
650.0	12161.	-2.9	-24.6	17.	273.2	34.9
600.0	14223.	-7.4	-28.4	17.	266.8	37.4
550.0	16426.	-12.2	-32.6	16.	262.5	39.4
500.0	18792.	-17.5	-37.2	16.	260.3	46.5
450.0	21356.	-22.9	-40.6	16.	257.7	44.2
400.0	24152.	-29.0	-45.7	18.	257.3	57.5
350.0	27229.	-37.7	-57.7	10.**	253.1	60.5
300.0	30648.	-46.2			248.3	61.0
250.0	34545.	-55.3			247.1	64.0
200.0	39158.	-60.1			248.9	88.2
175.0	41921.	-56.1			245.7	62.3
150.0	45141.	-56.4			255.2	62.6
125.0	48935.	-57.9			253.9	56.1
100.0	53517.	-60.5			245.2	39.9
80.0	58076.	-61.0			240.6	44.6
70.0	60795.	-61.4			240.8	48.7
60.0	63938.	-59.2			233.0	28.3
50.0	67694.	-57.5			227.1	6.8
40.0	72376.	-52.6			264.6	25.4
30.0	78513.	-50.8			92.4	10.7
25.0	82450.	-46.5			212.9	6.7
20.0	87358.	-41.5			243.8	20.2
15.0	93827.	-37.0			78.2	H.7
10.0	103041.	-36.4				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FLET MSL  
31 MAR. 61 0755 HRS MST  
ASCENSION NO. 16

SIG. IN INCLINOMETER  
09001.0001.  
L.C.-37

TABLE 9

GEODETIC COORDINATES  
32°40'17.5" LAT DEG  
106°31'23.2" LON DEG

PRESSURE MILLIBARS	CLIMATIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
880.3	4051.4	13.6	-1.9	34.0
873.2	4274.5	11.8	-4.3	32.0
862.6	4609.3	10.9	-5.1	32.0
850.0	5012.2	11.0	-5.5	31.0
793.0	6901.0	7.4	-6.7	36.0
734.8	8942.5	2.0	-7.6	49.0
725.2	9291.1	1.9	-11.6	36.0
700.0	10224.6	-3	-16.1	29.0
678.4	11045.2	-2.4	-18.8	27.0
660.0	11761.9	-2.7	-21.9	21.0
579.8	15100.0	+8.6	-27.4	20.0
500.0	18808.0	-17.8	-35.7	19.0
479.2	19850.5	-19.2	-36.9	19.0
417.8	23147.0	-28.1	-41.9	25.0
400.0	24170.2	-30.5	-43.0	28.0
388.6	24844.9	-31.6	-44.6	26.0
347.2	27428.8	-38.8	-49.7	30.0
333.8	28313.3	-41.3		
300.0	30676.2	-45.9		
265.6	33306.1	-52.6		
250.0	34586.2	-55.6		
226.6	36634.6	-59.0		
211.0	38104.1	-60.3		
200.0	39206.7	-59.2		
191.0	40159.4	-58.3		
186.4	40664.2	-59.0		
181.4	41228.4	-57.3		
168.0	42835.6	-55.1		
163.6	43393.3	-55.9		
150.0	45213.9	-55.9		
141.8	46392.5	-56.2		
114.2	50867.2	-62.1		
106.8	52234.3	-61.8		
100.0	53574.5	-62.9		
96.0	54403.2	-63.5		
79.2	58330.7	-60.6		
70.0	60862.6	-61.6		
59.8	64110.3	-58.3		
55.0	65837.0	-61.4		
50.9	67423.6	-61.6		

STATION ALTITUDE 4651.37 FEET MSL  
31 MAR. 81 0755 HRS MST  
ASCENSION NO. 16

SIGNIFICANT LEVEL DATA  
09001.0016  
LC-37  
TABLE 9 cont'

GEODETIC COORDINATES  
32.40175 LAT UEG  
106.31232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES	REL. HUM. PERCENT
50.0	67790.1	-60.1	
43.2	70851.9	-53.4	
40.5	72218.6	-55.4	
37.5	73859.1	-50.6	
30.0	78655.8	-51.8	
24.2	83336.6	-44.8	
21.4	86048.7	-46.4	
20.0	87541.3	-44.8	
15.4	93425.9	-37.2	
13.6	96284.1	-35.1	
12.4	98409.6	-37.0	
10.0	103341.1	-37.0	
7.0	111509.3	-37.8	
6.6	112860.0	-36.1	
6.6	112860.0	-36.1	

STATION ALTITUDE 4051.37 FEET MSL  
 31 MAR. 01 0755 IRS MST  
 ASCENSION NO. 16

UPPER AIR DATA  
 09001600016  
 LC-37  
 TABLE 10

GEODETIC COORDINATES  
 32°40'17.5 LAT DEG  
 106°31'23.2 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	INCL. DATA (DEGREES (IN))	INCL. OF REFRACTION
4051.4	880.3	13.6	-1.9	34.0	1067.0	660.5	350.0
4500.0	866.0	11.2	-4.9	32.0	1054.1	657.5	345.3
5000.0	850.4	11.0	-5.4	31.0	1046.7	657.3	341.6
5500.0	834.9	10.1	-5.7	32.3	1025.1	656.2	338.9
6000.0	819.7	9.1	-6.0	33.6	1004.8	655.1	320.5
6500.0	804.8	8.2	-6.4	34.9	994.8	654.0	297.5
7000.0	790.1	7.1	-6.7	36.6	980.2	652.8	289.8
7500.0	775.5	5.8	-6.8	39.8	960.6	651.3	286.2
8000.0	761.1	4.5	-7.0	43.0	953.3	649.7	285.1
8500.0	747.0	3.2	-7.3	46.2	940.1	648.2	282.6
9000.0	733.2	2.0	-8.2	46.9	926.8	646.7	279.9
9500.0	719.5	1.4	-12.5	34.4	911.6	645.9	278.1
10000.0	706.0	0.2	-15.0	30.7	898.7	644.5	277.1
10500.0	692.7	-1.0	-17.0	28.3	885.9	643.0	277.2
11000.0	679.6	-2.3	-18.7	27.1	873.3	641.4	275.6
11500.0	666.7	-2.6	-20.7	23.2	857.8	641.0	273.2
12000.0	653.9	-3.1	-22.3	20.9	843.1	640.4	270.7
12500.0	641.4	-4.0	-23.2	20.8	829.7	639.3	269.3
13000.0	629.0	-4.9	-24.0	20.6	816.4	638.2	269.0
13500.0	616.9	-5.8	-24.8	20.5	803.9	637.2	268.2
14000.0	605.1	-6.7	-25.6	20.3	790.6	636.1	267.4
14500.0	593.5	-7.5	-26.5	20.2	778.0	635.1	266.4
15000.0	582.1	-8.4	-27.3	20.0	765.6	634.0	265.5
15500.0	570.6	-9.6	-28.3	19.9	753.9	632.6	264.6
16000.0	559.3	-10.8	-29.5	19.8	742.5	631.1	263.2
16500.0	548.0	-12.1	-30.6	19.6	731.3	629.6	260.7
17000.0	537.4	-13.3	-31.7	19.5	720.3	628.1	259.5
17500.0	526.8	-14.6	-32.8	19.4	709.5	626.6	258.6
18000.0	516.4	-15.8	-33.9	19.2	698.8	625.0	258.7
18500.0	506.2	-17.0	-35.0	19.1	688.4	623.5	258.7
19000.0	496.1	-18.1	-35.9	19.0	677.4	622.3	258.3
19500.0	486.1	-18.7	-36.5	19.0	665.4	621.5	257.7
20000.0	476.2	-19.6	-37.1	19.3	654.2	620.4	257.6
20500.0	466.4	-21.0	-37.8	20.2	644.2	618.7	257.4
21000.0	456.8	-22.3	-38.5	21.1	634.3	617.1	258.3
21500.0	447.4	-23.7	-39.3	22.0	624.6	615.4	259.1
22000.0	438.2	-25.0	-40.1	22.9	615.1	613.7	259.2
22500.0	429.2	-26.4	-40.9	23.8	605.7	612.1	258.5
23000.0	420.4	-27.7	-41.7	24.7	596.5	610.4	257.2
23500.0	411.6	-28.9	-42.3	26.0	587.0	608.9	255.0

STATION ALTITUDE 4051.37 FEET MSL  
31 MAR. 61 0755 IRS MST  
ASCENSION NO. 16

UPPER AIR DATA  
09001A0016  
LC-37

TABLE 10 cont'

GEODETIC COORDINATES  
32.40175 LAT DEG  
106.31232 LONG DEG

GEOMETRIC ALTITUDE ASL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPPOINT CENTIGRADE	REL.HUM. PERCENT	GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, HEIGHTS (IN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	402.9	-30.1	-42.8	27.5	577.4	607.4	253.1	54.0	1.000129
24500.0	394.4	-31.0	-43.8	27.0	567.4	606.2	251.6	54.9	1.000127
25000.0	386.0	-32.0	-44.9	26.2	557.6	605.0	250.9	55.8	1.000125
25500.0	377.7	-33.4	-45.9	27.0	548.8	603.2	250.3	56.8	1.000123
26000.0	369.5	-34.8	-46.9	27.8	540.1	601.5	249.7	57.6	1.000121
26500.0	361.5	-36.2	-47.9	28.6	531.5	599.7	249.2	58.1	1.000119
27000.0	353.6	-37.6	-48.9	29.3	523.2	597.9	248.4	58.7	1.000117
27500.0	346.1	-39.0	-50.6	27.6**	514.9	596.1	247.6	59.4	1.000115
28000.0	338.5	-40.4	-59.6	10.6**	506.6	594.5	246.5	60.4	1.000113
28500.0	331.6	-41.7			498.1	592.7	245.4	61.5	1.000111
29000.0	325.6	-42.6			489.0	591.5	244.5	62.6	1.000109
29500.0	318.4	-43.6			480.2	590.2	244.0	63.5	1.000107
30000.0	309.3	-44.6			471.4	589.0	244.7	63.8	1.000105
30500.0	302.4	-45.6			462.9	587.7	245.5	63.9	1.000103
31000.0	295.5	-46.7			454.7	586.2	246.6	63.4	1.000101
31500.0	288.6	-48.0			446.8	584.6	247.5	63.2	1.000100
32000.0	282.2	-49.3			439.1	582.9	247.7	63.5	1.000098
32500.0	275.7	-50.5			431.5	581.2	247.7	63.9	1.000096
33000.0	269.4	-51.8			424.0	579.6	247.6	64.8	1.000094
33500.0	263.2	-53.0			416.4	578.0	247.5	66.4	1.000093
34000.0	257.0	-54.0			408.6	576.7	247.5	68.9	1.000091
34500.0	251.0	-55.0			401.9	575.4	247.6	71.3	1.000089
35000.0	245.1	-56.0			393.1	574.1	247.6	73.6	1.000088
35500.0	239.3	-56.9			385.5	572.9	247.4	74.7	1.000086
36000.0	233.6	-57.8			377.9	571.7	246.9	74.4	1.000084
36500.0	228.1	-58.8			370.6	570.4	246.3	73.8	1.000083
37000.0	222.6	-59.3			362.7	569.7	245.5	72.9	1.000081
37500.0	217.3	-59.8			354.7	569.1	244.6	72.3	1.000079
38000.0	212.1	-60.2			346.9	568.5	244.2	72.5	1.000077
38500.0	207.0	-59.9			338.1	568.9	243.8	73.2	1.000075
39000.0	202.0	-59.4			329.3	569.6	243.7	74.7	1.000073
39500.0	197.2	-58.9			321.7	570.2	243.8	76.2	1.000071
40000.0	192.5	-58.5			312.3	570.8	244.4	77.7	1.000070
40500.0	187.9	-58.6			305.3	570.4	244.9	78.8	1.000068
41000.0	183.4	-58.0			297.0	571.4	245.3	78.7	1.000066
41500.0	179.1	-56.9			288.5	572.9	245.6	78.5	1.000064
42000.0	174.8	-56.2			280.8	573.8	245.7	78.0	1.000063
42500.0	170.7	-55.6			273.3	574.7	245.8	77.4	1.000061
43000.0	166.7	-55.3			266.6	575.0	246.0	78.9	1.000059
43500.0	162.8	-55.9			261.0	574.2	247.4	80.5	1.000058

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL  
 31 MAR. 81 0755 HRS MST  
 ASCENSION NO. 16

UPPER AIR DATA  
 0900160016  
 LC-37  
 TABLE 10 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
44000.0	158.9	-55.9	254.9	574.2	248.5	01.3	1.000057	
44500.0	155.2	-55.9	248.9	574.2	249.7	02.0	1.000055	
45000.0	151.5	-55.9	243.0	574.2	250.5	00.2	1.000054	
45500.0	148.0	-56.0	237.3	574.1	251.4	77.1	1.000053	
46000.0	144.5	-56.1	231.9	574.0	252.0	73.9	1.000052	
46500.0	141.1	-56.3	226.7	573.6	252.2	70.7	1.000050	
47000.0	137.7	-57.0	221.9	572.8	252.5	67.7	1.000049	
47500.0	134.4	-57.7	217.3	571.9	252.0	66.0	1.000048	
48000.0	131.2	-58.3	212.7	571.0	251.6	64.4	1.000047	
48500.0	128.1	-59.0	208.3	570.1	251.1	63.0	1.000046	
49000.0	125.0	-59.6	203.9	569.3	250.7	61.7	1.000045	
49500.0	122.0	-60.3	199.7	568.4	250.1	60.4	1.000044	
50000.0	119.1	-61.0	195.5	567.5	248.8	58.2	1.000044	
50500.0	116.2	-61.6	191.4	566.6	247.3	56.0	1.000043	
51000.0	113.5	-62.1	187.3	566.0	245.5	54.8	1.000042	
51500.0	110.7	-62.0	182.6	566.1	243.4	54.4	1.000041	
52000.0	108.0	-61.9	178.1	566.3	242.3	55.1	1.000040	
52500.0	105.4	-62.0	173.9	566.1	243.1	57.7	1.000039	
53000.0	102.9	-62.4	170.0	565.5	244.0	60.2	1.000038	
53500.0	100.4	-62.8	166.2	565.0	245.5	61.7	1.000037	
54000.0	97.9	-63.1	162.4	564.6	246.9	63.3	1.000036	
54500.0	95.5	-63.2	158.6	564.4	248.1	64.8	1.000035	
55000.0	93.2	-62.9	154.5	564.9	249.3	66.2	1.000034	
55500.0	91.0	-62.5	150.5	565.4	250.2	66.5	1.000034	
56000.0	88.8	-62.2	146.6	565.8	251.2	66.8	1.000033	
56500.0	86.6	-61.9	142.8	566.3	251.3	64.3	1.000032	
57000.0	84.5	-61.5	139.1	566.7	251.0	60.6	1.000031	
57500.0	82.5	-61.2	135.6	567.2	250.3	57.9	1.000030	
58000.0	80.5	-60.8	132.1	567.7	249.3	56.1	1.000029	
58500.0	78.5	-60.7	128.8	567.9	248.5	55.2	1.000029	
59000.0	76.7	-60.9	125.6	567.6	248.2	56.2	1.000028	
59500.0	74.8	-61.1	122.9	567.4	247.9	57.2	1.000027	
60000.0	73.0	-61.3	120.0	567.1	247.7	57.4	1.000027	
60500.0	71.2	-61.5	117.2	566.8	247.5	57.4	1.000026	
61000.0	69.5	-61.5	114.4	566.8	247.3	56.8	1.000025	
61500.0	67.9	-61.0	111.4	567.5	246.9	53.9	1.000025	
62000.0	66.2	-60.4	108.5	568.2	246.5	50.9	1.000024	
62500.0	64.7	-59.9	105.6	568.9	245.7	45.4	1.000024	
63000.0	63.1	-59.4	102.9	569.5	244.4	38.3	1.000023	
63500.0	61.6	-58.9	100.2	570.2	242.5	31.2	1.000022	

STATION ALTITUDE 4051.37 FEET MSL  
 31 MAR. 81 0755 HRS MST  
 ASCENSION NO. 16

UPPER AIR DATA  
 09001A0016  
 LC-37  
 TABLE 10 cont'

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER	WIND DATA DIRECTION, DEGREES (IN)	SPEED, KNOTS	INDEX OF REFRACTION
64000.0	60.1	-58.4	97.5	570.9	240.0	25.0	1.000022
64500.0	56.7	-59.0	95.5	570.1	235.8	18.9	1.000021
65000.0	57.3	-59.9	95.6	568.9	229.2	13.7	1.000021
65500.0	56.9	-60.8	91.7	567.7	224.5	11.6	1.000020
66000.0	54.6	-61.4	89.8	566.9	217.9	9.6	1.000020
66500.0	53.2	-61.5	87.6	566.8	213.7	8.7	1.000020
67000.0	52.0	-61.5	85.5	566.7	215.4	9.1	1.000019
67500.0	50.7	-61.3	83.4	567.1	217.0	9.5	1.000019
68000.0	49.5	-59.6	80.8	569.3	219.4	10.1	1.000018
68500.0	46.3	-58.5	78.5	570.7	221.9	10.8	1.000017
69000.0	47.2	-57.5	76.2	572.2	224.0	11.6	1.000017
69500.0	46.1	-56.4	74.0	573.6	226.9	12.2	1.000016
70000.0	45.0	-55.3	71.9	575.1	229.7	12.8	1.000016
70500.0	43.9	-54.2	69.9	576.5	232.6	13.4	1.000016
71000.0	42.9	-53.6	68.1	577.2	236.7	13.9	1.000015
71500.0	41.9	-54.3	66.7	576.3	240.4	14.5	1.000015
72000.0	40.9	-55.1	65.4	575.3	243.6	14.4	1.000015
72500.0	40.0	-54.6	63.7	576.0	247.2	13.6	1.000014
73000.0	39.0	-53.1	61.8	577.9	251.1	12.8	1.000014
73500.0	38.1	-51.7	60.0	579.8	254.9	11.7	1.000013
74000.0	37.3	-50.6	58.3	581.1	259.4	10.4	1.000013
74500.0	36.4	-50.8	57.0	581.0	265.2	9.2	1.000013
75000.0	35.6	-50.9	55.7	580.8	266.7	8.8	1.000012
75500.0	34.7	-51.0	54.5	580.6	268.2	8.4	1.000012
76000.0	33.9	-51.1	53.3	580.5	269.5	8.0	1.000012
76500.0	33.2	-51.3	52.1	580.3	269.2	7.4	1.000012
77000.0	32.4	-51.4	50.9	580.2	268.6	6.8	1.000011
77500.0	31.7	-51.5	49.8	581.3	269.1	6.0	1.000011
78000.0	30.9	-51.6	48.6	579.8	271.9	4.9	1.000010
78500.0	30.2	-51.8	47.5	579.7	276.4	3.7	1.000011
79000.0	29.5	-51.3	46.4	580.3	286.2	2.5	1.000010
79500.0	28.9	-50.5	45.2	581.3	319.4	1.4	1.000010
80000.0	28.2	-49.8	44.0	582.2	24.1	1.5	1.000010
80500.0	27.6	-49.0	42.8	583.2	50.1	2.6	1.000010
81000.0	26.9	-48.3	41.7	584.2	58.7	3.5	1.000009
81500.0	26.3	-47.5	40.7	585.2	63.7	4.5	1.000009
82000.0	25.7	-46.8	39.6	586.1	66.1	5.0	1.000009
82500.0	25.1	-46.1	38.6	587.1	65.2	3.4	1.000009
83000.0	24.6	-45.3	37.6	588.1	62.9	1.8	1.000008
83500.0	24.0	-44.9	36.7	588.6	333.3	.2	1.000008

STATION ALTITUDE 4051.37 FEET MSL  
31 MAR. 81 0755 HRS MST

ASCENSION NO. 16

UPPER AIR DATA  
0900100016  
LC-37  
TABLE 10 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC	SPEED KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
84000.0	23.5	-45.2	35.9	5.08.2	254.7	3.0	1.000008	
84500.0	23.0	-45.5	35.1	5.07.8	252.9	6.0	1.000008	
85000.0	22.4	-45.8	34.4	5.07.4	252.3	8.7	1.000008	
85500.0	21.9	-46.1	33.7	5.07.1	252.2	9.4	1.000007	
86000.0	21.4	-46.4	32.9	5.06.7	252.1	10.1	1.000007	
86500.0	21.0	-45.9	32.1	5.07.3	252.0	10.6	1.000007	
87000.0	20.5	-45.4	31.3	5.08.0	251.1	9.3	1.000007	
87500.0	20.0	-44.8	30.6	5.08.6	250.0	8.0	1.000007	
88000.0	19.6	-44.2	29.8	5.09.5	248.5	6.7	1.000007	
88500.0	19.2	-43.6	29.1	5.00.3	245.5	6.1	1.000006	
89000.0	18.7	-42.9	28.4	5.01.1	241.9	5.6	1.000006	
89500.0	18.3	-42.3	27.7	5.02.0	237.7	5.1	1.000006	
90000.0	17.9	-41.6	27.0	5.02.8	234.4	5.0	1.000006	
90500.0	17.5	-41.0	26.3	5.03.6	231.3	5.0	1.000006	
91000.0	17.2	-40.3	25.7	5.04.4	228.2	4.9	1.000006	
91500.0	16.8	-39.7	25.0	5.05.3	223.4	4.6	1.000006	
92000.0	16.4	-39.0	24.4	5.06.1	216.2	4.0	1.000005	
92500.0	16.0	-38.4	23.8	5.06.9	207.0	3.6	1.000005	
93000.0	15.7	-37.8	23.2	5.07.7	194.3	3.2	1.000005	
93500.0	15.4	-37.1	22.7	5.08.5	176.1	2.9	1.000005	
94000.0	15.0	-36.6	22.1	5.09.0	156.7	3.0	1.000005	
94500.0	14.7	-36.4	21.6	5.09.4	140.1	3.4	1.000005	
95000.0	14.4	-36.0	21.1	5.09.9	130.1	3.7	1.000005	
95500.0	14.1	-35.7	20.6	6.00.3	122.1	4.2	1.000004	
96000.0	13.8	-35.3	20.2	6.00.8	115.7	4.7	1.000004	
96500.0	13.5	-35.3	19.7	6.00.8	118.3	4.8	1.000004	
97000.0	13.2	-35.7	19.3	6.00.3	124.1	4.8	1.000004	
97500.0	12.9	-36.2	19.0	5.09.7	129.8	4.9	1.000004	
98000.0	12.6	-36.6	18.6	5.09.1	139.5	5.0	1.000004	
98500.0	12.4	-37.0	18.2	5.08.7	154.3	5.4	1.000004	
99000.0	12.1	-37.0	17.8	5.08.7	166.4	6.1	1.000004	
99500.0	11.8	-37.0	17.4	5.08.7	175.3	7.0	1.000004	
100000.0	11.6	-37.0	17.1	5.08.7	179.0	7.1	1.000004	
100500.0	11.3	-37.0	16.7	5.08.7	182.6	7.3	1.000004	
101000.0	11.1	-37.0	16.3	5.08.7	186.0	7.5	1.000004	
101500.0	10.8	-37.0	16.0	5.08.7	186.0	8.7	1.000004	
102000.0	10.6	-37.0	15.6	5.08.7	185.2	10.1	1.000003	
102500.0	10.4	-37.0	15.3	5.08.7	184.6	11.5	1.000003	
103000.0	10.1	-37.0	15.0	5.08.7	182.7	13.3	1.000003	
103500.0	9.9	-37.0	14.7	5.08.7	179.9	15.8	1.000003	

STATION ALTITUDE 4051.37 FEET MSL  
 31 MAR. 81 0755 HRS MST  
 ASCENSION NO. 16

UPPER AIR DATA  
 09001A0016  
 LC-37

TABLE 10 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPONT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
104000.0	9.7	-37.1			14.3	598.6	177.8	18.3	1.00003
104500.0	9.5	-37.1			14.0	598.5	176.4	20.4	1.00003
105000.0	9.3	-37.2			13.7	598.5	176.2	20.4	1.00003
105500.0	9.1	-37.2			13.4	598.4	176.0	20.4	1.00003
106000.0	9.9	-37.3			13.1	598.3	175.8	20.4	1.00003
106500.0	8.7	-37.3			12.9	598.3	178.2	20.0	1.00003
107000.0	8.5	-37.4			12.6	598.2	181.2	19.4	1.00003
107500.0	8.3	-37.4			12.3	598.2	184.4	19.0	1.00003
108000.0	8.2	-37.5			12.1	598.1	184.4	19.6	1.00003
108500.0	8.0	-37.5			11.8	598.0	182.0	21.1	1.00003
109000.0	7.8	-37.6			11.5	598.0	180.0	22.7	1.00003
109500.0	7.6	-37.6			11.3	597.9	179.7	23.9	1.00003
110000.0	7.5	-37.7			11.1	597.8	184.6	23.8	1.00002
110500.0	7.3	-37.7			10.8	597.8	189.5	24.0	1.00002
111000.0	7.2	-37.8			10.6	597.7	194.3	24.3	1.00002
111500.0	7.0	-37.8			10.4	597.7			1.00002
112000.0	6.9	-37.2			10.1	598.4			1.00002
112500.0	6.7	-36.6			9.9	599.2			1.00002

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

STATION ALTITUDE 4051.37 FEET MSL  
 31 MAR. 81 0755 HRS MST  
 ASCENSION NO. 16

MANDATORY LEVELS  
 09001A016  
 LC-37  
 TABLE 11

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	RH1 + HUM. AIR DEMPNT CENTIGRADE		WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS
			PERCENT	PERCENT		
850.0	5009.	11.0	-5.5	31.	341.5	6.7
800.0	6658.	7.9	-6.5	35.	294.1	14.2
750.0	8390.	3.5	-7.2	46.	283.2	26.5
700.0	10215.	-3	-16.1	29.	277.2	29.8
650.0	12146.	-3.4	-22.6	21.	270.1	32.7
600.0	14208.	-7.0	-26.0	20.	266.9	38.0
550.0	16415.	-11.9	-30.4	20.	261.1	38.7
500.0	18782.	-17.6	-35.7	19.	258.5	45.3
450.0	21344.	-23.3	-39.1	22.	258.9	49.6
400.0	24130.	-30.5	-43.0	28.	252.7	54.3
350.0	27198.	-38.3	-49.4	30.	248.0	54.0
300.0	30616.	-45.9			245.0	63.7
250.0	34512.	-55.2			247.6	71.6
200.0	39114.	-59.2			243.6	75.3
175.0	41873.	-56.3			245.7	78.0
150.0	45094.	-55.9			250.8	79.0
125.0	48875.	-59.6			250.7	61.8
100.0	53411.	-62.9			245.6	61.9
80.0	57934.	-60.7			249.1	55.7
70.0	60655.	-61.6			247.4	57.4
60.0	63813.	-58.4			239.9	24.9
50.0	67537.	-50.1			218.1	9.7
40.0	72194.	-54.6			246.8	13.7
30.0	78321.	-51.8			277.9	3.4
25.0	82251.	-45.9			65.0	3.2
20.0	87132.	-44.8			250.1	4.0
15.0	93560.	-36.8			157.4	5.0
10.0	102780.	-37.0			161.0	14.6
7.0	110861.	-37.8				

EODETIC COORDINATES  
 32.40175 LAT UEG  
 106.31232 LON DEG

STATION ALTITUDE 4126.59 FEET MSL  
 31 MAR. 61 0655 HRS MST  
 ASCENSION NO. 53

SIGNIFICANT LEVEL DATA  
 0900010053  
 HOLLOWMAN  
 TABLE 12

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES	AIR DEWPOINT CENTIGRADE	REL. HUM. PERCENT
876.4	4126.6	5.6	-5.7	44.0
866.2	4444.3	11.3	-2.8	37.0
850.0	4961.3	10.6	-3.8	36.0
700.0	10156.8	-11.6	-11.1	48.0
668.4	11360.3	-3.9	-17.1	35.0
659.0	11727.8	-3.7	-21.8	23.0
629.3	12920.1	-5.7	-25.0	20.0
500.0	18696.9	-19.1	-35.3	27.0
472.6	20071.2	-21.0	-36.2	24.0
400.0	24040.9	-31.3	-42.8	31.0
388.4	24725.8	-32.1	-42.1	36.0
334.4	28142.9	-40.6	-49.3	38.0
327.9	28583.0	-40.6		
300.0	30555.0	-45.7		
250.0	34475.2	-54.7		
232.8	35966.7	-57.8		
228.0	36401.2	-56.2		
200.0	39120.1	-60.0		
185.8	40636.5	-59.6		
171.3	42317.7	-58.0		
163.8	43245.4	-59.0		
162.5	43411.1	-56.7		
150.0	45082.5	-57.1		
128.0	48372.4	-59.6		
117.2	50190.8	-59.6		
109.1	51674.6	-57.8		
100.0	53478.6	-59.8		
81.2	57744.9	-62.6		
70.0	60782.3	-60.4		
63.1	62928.1	-58.3		
55.4	65631.1	-58.6		
50.0	67741.3	-62.4		
43.8	70504.4	-52.6		
39.2	72859.9	-55.1		
33.6	76152.0	-50.1		
30.0	78593.2	-51.4		
22.8	84580.5	-44.6		
20.0	87475.2	-45.9		
17.0	91076.9	-43.3		

STATION ALTITUDE 4126.59 FEET MSL  
31 MAR. 61 0655 HRS MST  
ASCENSION NO. 53

UPPER AIR DATA  
0900010053  
HOLLOWMAN  
TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEPOINT DEGREES	CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN) SPEED KNOTS	INDEX OF REFRACTION
4126.6	876.4	5.6	-5.7	44.0	1093.4	651.0	30.0	4.1	1.000263
4500.0	864.4	11.2	-2.9	36.9	1056.7	657.7	12.4	6.4	1.000258
5000.0	848.8	10.5	-3.9	36.1	1040.3	656.8	2.7	9.8	1.000253
5500.0	833.1	9.3	-4.5	37.2	1025.3	655.4	358.2	13.4	1.000249
6000.0	817.6	8.2	-5.1	38.4	1010.6	654.0	353.1	13.4	1.000245
6500.0	802.5	7.0	-5.8	39.6	996.1	652.7	344.0	10.8	1.000241
7000.0	787.6	5.8	-6.5	40.7	981.8	651.3	327.0	9.0	1.000237
7500.0	773.1	4.6	-7.2	41.9	967.8	649.9	304.5	8.5	1.000233
8000.0	758.8	3.5	-7.9	43.0	954.0	648.5	289.0	10.6	1.000229
8500.0	744.7	2.3	-8.6	44.2	940.4	647.1	279.0	12.9	1.000225
9000.0	730.9	1.1	-9.4	45.3	927.0	645.7	271.7	14.8	1.000222
9500.0	717.4	-1.1	-10.1	46.5	913.8	644.3	268.9	16.6	1.000218
10000.0	704.1	-1.2	-10.9	47.6	900.8	642.9	267.6	18.2	1.000214
10500.0	690.8	-2.3	-12.7	44.3	887.3	641.6	271.6	22.3	1.000209
11000.0	677.7	-3.2	-15.2	38.9	873.7	640.4	274.4	26.6	1.000204
11500.0	664.8	-3.8	-18.6	30.4	859.2	639.6	276.5	31.3	1.000199
12000.0	652.1	-4.2	-22.5	22.3	844.0	639.1	277.6	35.1	1.000193
12500.0	639.6	-5.0	-23.8	21.1	830.5	638.1	277.7	36.9	1.000190
13000.0	627.3	-5.9	-25.1	20.1	817.3	637.0	277.0	38.4	1.000186
13500.0	614.9	-7.0	-25.8	20.7	804.7	635.7	275.5	39.3	1.000183
14000.0	602.8	-8.2	-26.4	21.3	792.3	634.3	272.9	39.7	1.000180
14500.0	590.9	-9.4	-27.1	21.9	780.1	632.9	269.8	40.0	1.000177
15000.0	579.5	-10.5	-27.8	22.5	768.1	631.5	268.0	40.2	1.000174
15500.0	567.9	-11.7	-28.5	23.1	756.3	630.1	266.0	40.4	1.000172
16000.0	556.7	-12.8	-29.2	23.7	744.7	628.7	268.1	40.2	1.000169
16500.0	545.7	-14.0	-30.0	24.3	733.3	627.3	269.1	40.0	1.000166
17000.0	534.9	-15.2	-30.7	24.9	722.1	625.8	269.1	39.4	1.000164
17500.0	524.4	-16.3	-31.5	25.5	711.1	624.4	268.5	39.8	1.000161
18000.0	514.1	-17.5	-32.2	26.2	700.2	623.0	267.1	41.1	1.000158
18500.0	503.9	-18.6	-33.0	26.8	689.6	621.6	264.2	43.7	1.000156
19000.0	493.8	-19.5	-33.9	26.3	678.1	620.5	260.9	46.7	1.000153
19500.0	483.8	-20.2	-35.0	25.2	666.2	619.7	257.9	49.1	1.000150
20000.0	474.0	-20.9	-36.0	24.2	654.4	618.8	255.1	51.5	1.000147
20500.0	464.2	-22.1	-36.8	24.8	644.0	617.3	253.4	53.6	1.000145
21000.0	454.5	-23.4	-37.6	25.6	633.9	615.7	251.9	55.6	1.000143
21500.0	445.1	-24.7	-36.4	26.5	624.0	614.1	251.0	57.5	1.000140
22000.0	435.8	-26.0	-37.2	27.4	614.2	612.5	250.3	59.1	1.000138
22500.0	426.8	-27.3	-40.1	28.3	604.6	610.9	251.4	59.1	1.000136
23000.0	417.9	-28.6	-40.9	29.2	595.2	609.3	252.5	59.0	1.000134
23500.0	409.2	-29.9	-41.8	30.0	585.9	607.7	253.5	57.9	1.000131

STATION ALTITUDE 4126.59 FEET MSL  
31 MAR. 81 0655 HRS MST  
ASCENSION NO. 53

UPPER AIR DATA  
0900010053  
HOLLOWMAN

TABLE 13 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	SOUND SPEED METER KNOTS	WIND DATA		INDEX OF REFRACTION
					DIRECTION DEGREES (TN)	SPEED KNOTS	
24000.0	400.7	-31.2	-42.7	30.9	576.8	606.0	251.8
24500.0	392.2	-31.8	-42.3	34.4	566.1	605.2	250.4
25000.0	383.8	-32.8	-42.7	36.2	556.1	604.0	249.8
25500.0	375.4	-34.0	-43.7	36.5	546.9	602.5	249.9
26000.0	367.3	-35.3	-44.8	36.7	537.9	600.9	249.6
26500.0	359.4	-36.5	-45.8	37.0	529.0	599.3	249.3
27000.0	351.6	-37.8	-46.9	37.3	520.2	597.7	249.1
27500.0	344.0	-39.0	-48.0	37.6	511.7	596.2	248.8
28000.0	336.5	-40.2	-49.0	37.9	503.3	594.6	248.5
28500.0	329.1	-40.6	-62.7	7.2**	493.0	594.1	247.6
29000.0	321.8	-41.8			484.3	592.7	247.2
29500.0	314.6	-43.0			476.2	591.1	247.1
30000.0	307.6	-44.3			468.2	589.4	246.9
30500.0	300.7	-45.6			460.3	587.7	246.6
31000.0	293.9	-46.7			452.1	586.2	245.8
31500.0	287.1	-47.9			444.0	584.7	245.1
32000.0	280.5	-49.0			436.0	583.2	244.4
32500.0	274.1	-50.2			428.1	581.7	244.1
33000.0	267.8	-51.3			420.5	580.2	243.7
33500.0	261.6	-52.5			412.9	578.7	243.9
34000.0	255.6	-53.6			405.6	577.2	244.3
34500.0	249.7	-54.6			398.3	575.7	244.4
35000.0	243.8	-55.8			390.8	574.4	244.5
35500.0	238.1	-56.8			383.4	573.0	244.4
36000.0	232.4	-57.7			375.6	571.9	243.7
36500.0	226.9	-56.3			364.6	573.6	243.0
37000.0	221.5	-57.0			357.1	572.7	242.3
37500.0	216.2	-57.7			349.7	571.8	241.6
38000.0	211.1	-58.4			342.5	570.9	242.3
38500.0	206.1	-59.1			335.4	569.9	243.2
39000.0	201.2	-59.8			328.5	569.0	244.5
39500.0	196.3	-59.9			320.7	568.9	246.1
40000.0	191.6	-59.8			312.9	569.1	247.4
40500.0	187.0	-59.6			305.2	569.3	248.0
41000.0	182.6	-59.3			297.3	569.8	248.7
41500.0	178.2	-58.8			289.6	570.4	248.8
42000.0	174.0	-58.5			282.1	571.0	248.6
42500.0	169.8	-58.2			275.2	571.2	248.4
43000.0	165.8	-58.7			269.3	570.5	248.2
43500.0	161.8	-56.7			260.4	573.1	248.2

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FFET MSL  
 31 MAR. 81 0655 IRS MST  
 ASCENSION NO. 53

UPPER AIR DATA  
 0900010053  
 HOLLOWAY

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND METER	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
44000.0	156.0	-56.8	254.4	573.0	248.6	72.1
44500.0	154.2	-57.0	248.5	572.8	249.0	73.3
45000.0	150.6	-57.1	242.8	572.7	249.9	75.9
45500.0	147.0	-57.4	237.4	572.2	250.6	77.7
46000.0	143.5	-57.8	232.1	571.7	250.7	76.0
46500.0	140.1	-58.2	227.0	571.2	250.7	73.9
47000.0	136.8	-58.6	222.0	570.7	250.1	69.4
47500.0	133.5	-58.9	217.1	570.2	249.3	64.9
48000.0	130.3	-59.3	212.3	569.7	248.2	62.0
48500.0	127.2	-59.6	207.5	569.3	247.0	59.1
49000.0	124.2	-59.6	202.5	569.3	246.3	59.7
49500.0	121.2	-59.6	197.7	569.3	245.7	60.5
50000.0	118.3	-59.6	193.0	569.3	245.5	62.6
50500.0	115.5	-59.2	188.0	569.8	245.5	64.9
51000.0	112.7	-58.6	183.0	570.6	245.5	66.6
51500.0	110.0	-58.0	178.2	571.4	245.7	67.6
52000.0	107.4	-58.2	174.0	571.2	245.9	68.4
52500.0	104.8	-58.7	170.3	570.5	246.5	66.4
53000.0	102.3	-59.3	166.7	569.7	247.1	64.4
53500.0	99.9	-59.8	163.1	569.0	247.0	60.9
54000.0	97.5	-60.1	159.4	568.6	248.7	56.7
54500.0	95.1	-60.5	155.8	568.1	249.6	52.9
55000.0	92.8	-60.8	152.3	567.7	250.3	50.0
55500.0	90.6	-61.1	148.9	567.3	251.0	47.2
56000.0	88.4	-61.5	145.5	566.8	250.7	45.4
56500.0	85.3	-61.8	142.2	566.4	250.1	43.8
57000.0	84.2	-62.1	139.0	565.9	248.8	43.0
57500.0	82.2	-62.4	135.9	565.5	246.5	43.3
58000.0	80.2	-62.4	132.6	565.5	244.2	43.0
58500.0	78.3	-62.1	129.1	566.0	241.5	44.9
59000.0	76.4	-61.7	125.8	566.0	238.6	46.3
59500.0	74.5	-61.3	122.6	567.0	236.7	46.1
60000.0	72.7	-61.0	119.4	567.5	235.1	42.5
60500.0	71.0	-60.6	116.3	568.0	233.2	39.0
61000.0	69.3	-60.2	113.3	568.0	234.3	32.6
61500.0	67.6	-59.7	110.3	569.2	237.3	25.8
62000.0	65.0	-59.2	107.5	569.8	242.7	19.6
62500.0	64.4	-58.7	104.7	570.5	250.8	18.2
63000.0	62.9	-58.3	102.0	571.0	200.0	17.2
63500.0	61.4	-58.4	99.6	571.0	202.6	17.2

TABLE 13 cont'

STATION ALTITUDE 4126.59 FEET A.S.T.  
31 MAR. 1965 HRS. MST  
ASCENSION NO. 53

UPPER AIR DATA  
0900010055  
HOLLOWAY  
TABLE 13 cont'

GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT PERCENT	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND DATA KNOTS	DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	59.9	-58.4			97.2	570.9	256.7	18.1	1.000022
64500.0	58.5	-58.5			94.9	570.8	251.5	19.2	1.000021
65000.0	57.1	-58.5			92.7	570.7	243.9	20.4	1.000021
65500.0	55.8	-58.6			90.5	570.7	236.5	21.9	1.000020
66000.0	54.4	-59.3			88.6	569.8	231.2	23.8	1.000020
66500.0	53.1	-60.2			86.9	568.6	229.6	25.9	1.000019
67000.0	51.8	-61.1			85.1	567.5	228.2	28.0	1.000019
67500.0	50.6	-62.0			83.5	566.1	226.6	26.9	1.000019
68000.0	49.4	-61.5			81.3	566.8	224.5	24.5	1.000018
68500.0	48.2	-59.7			78.7	569.2	222.0	21.9	1.000018
69000.0	47.1	-57.9			76.2	571.5	224.0	18.3	1.000017
69500.0	46.0	-56.2			73.8	573.9	226.1	14.7	1.000016
70000.0	44.9	-54.4			71.5	576.2	235.7	13.0	1.000016
70500.0	43.8	-52.6			69.2	578.5	244.5	12.8	1.000015
71000.0	42.8	-53.1			67.7	577.9	255.4	13.0	1.000015
71500.0	41.8	-53.7			65.3	577.2	260.3	13.5	1.000015
72000.0	40.8	-54.8			64.9	576.5	264.0	14.1	1.000014
72500.0	39.9	-54.7			63.6	575.8	267.5	14.7	1.000014
73000.0	38.9	-54.9			62.2	575.6	266.3	14.7	1.000014
73500.0	38.0	-54.1			60.5	576.6	265.2	14.8	1.000013
74000.0	37.2	-53.4			58.9	577.6	264.0	14.6	1.000013
74500.0	36.3	-52.6			57.3	578.5	262.6	13.5	1.000013
75000.0	35.5	-51.8			55.8	579.5	261.3	12.5	1.000012
75500.0	34.6	-51.1			54.3	580.5	260.3	10.9	1.000012
76000.0	33.8	-50.3			52.9	581.5	260.6	8.5	1.000012
76500.0	33.1	-50.3			51.7	581.6	261.1	6.1	1.000012
77000.0	32.3	-50.6			50.6	581.2	259.7	4.2	1.000011
77500.0	31.6	-50.8			49.5	580.9	253.3	2.8	1.000011
78000.0	30.8	-51.1			48.4	580.5	236.6	1.6	1.000011
78500.0	30.1	-51.4			47.3	580.2	213.9	1.5	1.000011
79000.0	29.4	-50.9			46.2	580.7	208.4	2.0	1.000010
79500.0	28.8	-50.4			45.0	581.5	205.2	2.5	1.000010
80000.0	28.1	-49.6			43.9	582.2	209.1	2.9	1.000010
80500.0	27.5	-49.2			42.8	583.0	217.1	3.2	1.000010
81000.0	26.9	-48.7			41.7	583.7	223.5	3.6	1.000009
81500.0	26.3	-48.1			40.6	584.4	231.0	3.9	1.000009
82000.0	25.7	-47.5			39.6	585.2	242.1	4.1	1.000009
82500.0	25.1	-47.0			38.6	585.9	250.9	4.5	1.000009
83000.0	24.5	-46.4			37.7	586.6	258.1	4.7	1.000008
83500.0	24.0	-45.8			36.7	587.4	264.9	4.5	1.000008

STATION ALTITUDE 4126.59 FEET MSL  
 31 MAR. 61 0655 HRS MST  
 ASCENSION NO. 53

UPPLR AIR DATA  
 0900010053  
 HOLLOWMAN

TABLE 13 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (IN) KNOTS	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
84000.0	23.4	-45.3	35.8	5.88.1	272.3	4.4	1.000008	
84500.0	22.9	-44.7	34.9	5.88.8	277.0	4.1	1.000008	
85000.0	22.4	-44.8	34.1	5.88.7	277.0	3.2	1.000008	
85500.0	21.9	-45.0	33.4	5.88.4	276.0	2.4	1.000007	
86000.0	21.4	-45.2	32.7	5.88.1	269.3	1.7	1.000007	
86500.0	20.9	-45.5	32.0	5.87.8	245.6	2.1	1.000007	
87000.0	20.4	-45.7	31.3	5.87.6	231.9	2.6	1.000007	
87500.0	20.0	-45.9	30.6	5.87.3	224.5	3.6	1.000007	
88000.0	19.5	-45.5	29.9	5.87.8	232.4	5.0	1.000007	
88500.0	19.1	-45.2	29.2	5.88.2	236.6	6.5	1.000006	
89000.0	18.7	-44.8	28.5	5.88.7	239.5	8.0	1.000006	
89500.0	18.3	-44.4	27.8	5.89.2			1.000006	
90000.0	17.8	-44.1	27.1	5.89.6			1.000006	
90500.0	17.4	-43.7	26.5	5.90.1			1.000006	
91000.0	17.1	-43.4	25.9	5.90.6			1.000006	

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

STATION ALTITUDE 4126.59 FEET MSL  
 31 MAR. '51 0655 HRS MST  
 ASCENSION NO. 53

MANDATORY LEVELS  
 0900010053  
 HOLLOWMAN  
 TABLE 14

GEODETIC COORDINATES  
 32°48'86" LAT DEG  
 106°09'65" LON DEG

PRESSURE MILLIBARS	GEO-POTENTIAL FEET	TEMPERATURE DEGREES	REL. HUM. PERCENT	WIND DATA	
				AIR DEWPOINT CENTIGRADE	DIRECTION DEGREES (TN)
850.0	4958.	10.6	-3.8	36.	3•2
800.0	6603.	6.8	-5.9	40.	341•3
750.0	8330.	2.7	-8.4	44.	282•0
700.0	10147.	-1.6	-11.1	48.	269•0
650.0	12072.	-4.3	-22.7	22.	277•7
600.0	14126.	-8.5	-26.6	21.	272•1
550.0	16319.	-13.5	-29.7	24.	39•8
500.0	18672.	-19.1	-33.3	27.	269•0
450.0	21223.	-24.0	-38.0	26.	40•1
400.0	24002.	-31.3	-42.8	31.	262•9
350.0	27067.	-38.0	-47.1	37.	44•8
300.0	30496.	-45.7			251•4
250.0	34403.	-54.7			56•5
200.0	39029.	-60.0			251•7
175.0	41771.	-56.4			57•6
150.0	44965.	-57.1			249•0
125.0	48725.	-59.6			73•0
100.0	53317.	-59.8			246•5
80.0	57861.	-62.4			64•5
70.0	60578.	-60.4			67•2
60.0	63750.	-58.4			73•8
50.0	67491.	-62.4			248•7
40.0	72149.	-54.6			75•3
30.0	78262.	-51.4			250•0
25.0	82187.	-46.9			76•2
20.0	87070.	-45.9			59•5

STATION ALTITUDE 4051.00 FEET MSL  
31 MAR. 81 0655 HRS. MST  
ASCENSION NO. 17

SIGNIFICANT LEVEL DATA  
0900000017  
JALLEN  
TABLE 15

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES	DEWPOINT CENTIGRADE	REL.HUM. PERCENT
870.6	4051.0	6.8	-9.1	51.0
863.4	4524.1	0.7	-3.2	40.0
850.0	4949.8	8.7	-4.1	40.0
745.2	8480.6	1.9	-10.2	40.0
700.0	10126.9	-2.1	-12.7	44.0
649.8	12053.1	-6.9	-16.0	48.0
640.2	12434.6	-7.3	-23.0	27.0
631.2	12797.1	-7.3	-24.8	23.0
585.8	14697.5	-10.3	-26.9	24.0
500.0	18637.3	-19.5	-32.6	30.0
427.6	22396.8	-27.9	-38.8	34.0
400.0	23963.9	-31.0	-38.2	49.0
328.0	28495.6	-41.5	-49.7	40.0
300.0	30466.4	-46.7		
273.0	32504.0	-51.5		

STATION ALTITUDE 4051.00 FEET MSL  
 31 MAR. A1 0655 IRS MST  
 ASCENSION NO. 17

UPPLR AIR DATA  
 0900030017  
 JALLEN  
 TABLE 16

GEODETIC COORDINATES  
 33.1671° LAT DEG  
 106.4951° LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEPOINT CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND KNOTS	WIND DATA DIR/CTN DEGREES (1N)	INDEX OF REFRACTION
4051.0	878.6	6.8	-9.1	31.0	1091.9	652.3	1.9
4500.0	864.2	9.6	-3.5	39.5	1062.7	655.7	2.3
5000.0	848.4	8.6	-4.2	40.0	1046.9	654.6	2.0
5500.0	832.7	7.6	-5.1	40.0	1031.2	653.4	1.7
6000.0	817.4	6.7	-5.9	40.0	1015.7	652.3	1.6
6500.0	802.3	5.7	-6.8	40.0	1000.5	651.1	1.5
7000.0	787.5	4.8	-7.7	40.0	985.5	650.0	1.4
7500.0	772.9	3.8	-8.5	40.0	970.8	648.8	1.3
8000.0	758.7	2.8	-9.4	40.0	956.2	647.7	1.2
8500.0	744.7	1.9	-10.3	40.0	942.0	646.5	1.1
9000.0	730.6	0.6	-11.0	41.3	928.4	645.1	1.0
9500.0	716.9	-0.6	-11.7	42.5	915.0	643.6	0.9
10000.0	703.4	-1.8	-12.5	43.7	901.9	642.2	0.8
10500.0	690.0	-3.0	-13.3	44.8	888.8	640.7	0.7
11000.0	676.8	-4.3	-14.2	45.8	875.9	639.2	0.6
11500.0	663.8	-5.5	-15.1	46.9	863.2	637.7	0.5
12000.0	651.1	-6.8	-15.9	47.9	850.7	636.7	0.4
12500.0	638.6	-7.3	-23.3	26.3	836.3	635.4	0.3
13000.0	626.2	-7.6	-25.0	23.1	821.1	635.0	0.2
13500.0	614.0	-8.4	-25.6	23.4	807.6	634.0	0.1
14000.0	602.1	-9.2	-26.2	23.6	794.3	633.1	0.0
14500.0	590.4	-10.0	-26.7	23.9	781.2	632.1	-0.1
15000.0	578.7	-11.0	-27.3	24.5	768.7	630.9	-0.2
15500.0	567.2	-12.2	-28.0	25.2	756.8	629.5	-0.3
16000.0	555.9	-13.3	-28.7	26.0	745.1	628.1	-0.4
16500.0	544.9	-14.5	-29.4	26.7	733.6	626.6	-0.5
17000.0	534.0	-15.7	-30.1	27.5	722.3	625.2	-0.6
17500.0	523.4	-16.8	-30.9	28.3	711.1	623.8	-0.7
18000.0	513.0	-18.0	-31.6	29.0	700.2	622.4	-0.8
18500.0	502.8	-19.2	-32.4	29.8	689.4	620.9	-0.9
19000.0	492.5	-20.3	-33.2	30.4	678.4	619.6	-1.0
19500.0	482.4	-21.4	-34.0	30.9	667.4	618.2	-1.1
20000.0	472.4	-22.5	-34.8	31.4	656.6	616.8	-1.2
20500.0	462.7	-23.7	-35.6	32.0	645.9	615.4	-1.3
21000.0	453.2	-24.8	-36.5	32.5	635.5	614.0	-1.4
21500.0	443.9	-25.9	-37.3	33.0	625.2	612.6	-1.5
22000.0	434.7	-27.0	-38.2	33.6	615.2	611.3	-1.6
22500.0	425.7	-28.1	-38.7	35.0	605.1	610.9	-1.7
23000.0	416.8	-29.1	-38.4	39.8	594.8	608.7	-1.8
23500.0	408.0	-30.1	-38.2	40.2	584.6	607.4	-1.9

STATION ALTITUDE 4051.00 FEET MSL  
 31 MAR. 81 0655 HRS MST  
 ASCENSION NO. 17

UPPER AIR DATA  
 0900030017  
 JALLEN  
 TABLE 16 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES	DEWPONT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND DATA KNOTS	WIND DIRECTION DEGREES (TN)	INDEX OF REFRACTION
24000.0	399.4	-31.1	-30.2	48.9	574.6	606.2	254.6	68.2
24500.0	390.7	-32.2	-39.5	47.9	564.9	604.7	255.2	69.0
25000.0	382.3	-33.4	-40.8	46.9	555.3	603.3	256.0	69.5
25500.0	374.0	-34.6	-42.1	45.9	546.0	601.8	256.6	68.9
26000.0	365.9	-35.7	-43.3	45.0	536.8	600.3	257.1	68.1
26500.0	356.0	-36.9	-44.6	44.0	527.7	598.9	256.6	67.7
27000.0	350.2	-38.0	-45.9	43.0	518.8	597.4	256.0	67.3
27500.0	342.6	-39.2	-47.2	42.0	510.1	595.9	254.6	67.5
28000.0	335.2	-40.4	-48.4	41.0	501.6	594.4	253.3	68.1
28500.0	327.9	-41.5	-49.7	39.9**	493.2	592.9	251.0	69.7
29000.0	320.6	-42.8	-53.4	29.8**	484.9	591.2	250.5	71.1
29500.0	313.4	-44.1	-57.0	19.6**	476.8	589.5	249.4	72.0
30000.0	306.0	-45.5	-64.5	9.5**	468.8	587.8	248.4	72.7
30500.0	299.5	-46.8			461.0	586.1	247.8	73.0
31000.0	292.7	-48.0			452.8	584.6	247.3	74.1
31500.0	286.0	-49.1			444.7	583.1	247.0	76.0
32000.0	279.4	-50.3			436.9	581.6	249.1	77.7
32500.0	273.1	-51.5			429.1	580.0		1.000096

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL  
 31 MAR. 01 0655 HRS. MST  
 ASCENSION 1.0. 17

MANUFACTORY LEVELS  
 0900030017  
 JALLEF N  
 TABLE 17

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		RH% HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS
		DEGREES	CENTIGRAVE			
850.0	4946.	8.7	-4.1	40.	323.9	2.9
800.0	6582.	5.6	-6.9	40.	304.8	7.0
750.0	8303.	2.2	-9.9	40.	274.5	13.7
700.0	10118.	-2.1	-12.7	44.	254.7	20.9
650.0	12033.	-6.9	-16.0	48.	272.3	31.3
600.0	14074.	-9.3	-26.3	24.	276.0	41.5
550.0	16263.	-14.0	-29.1	26.	267.1	42.2
500.0	18613.	-19.5	-32.6	30.	270.1	44.0
450.0	21153.	-25.2	-36.8	33.	252.0	59.1
400.0	23926.	-31.0	-38.2	49.	254.6	68.1
350.0	26989.	-38.1	-45.9	43.	255.9	67.3
300.0	30409.	-46.7	-46.7	247.8	73.0	

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL  
31 MAR. 61  
ASCENSION NO. 18

SIGNIFICANT LEVEL DATA  
0900030018  
JALLEN  
TABLE 18

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES	AIR DEWPOINT CENTIGRADE	REL. HUM. PERCENT
879.6	4051.0	13.9	-10.7	17.0
870.0	4353.4	11.9	-3.4	34.0
850.0	4989.9	9.8	-5.3	34.0
726.2	9206.1	-2	-10.4	46.0
700.0	10169.7	-1.7	-15.5	34.0
651.8	12024.7	-4.7	-22.1	24.0
598.2	14227.8	-8.5	-24.5	26.0
500.0	18701.7	-19.8	-32.2	32.0
466.8	20365.6	-23.8	-34.3	37.0
451.2	21180.6	-24.8	-35.5	36.0
400.0	24026.1	-31.2	-42.4	32.0
338.2	27069.7	-39.2	-50.4	31.0
300.0	30526.9	-46.5		
250.0	34429.5	-55.9		
216.8	37386.2	-60.2		
207.4	38300.0	-58.8		
200.0	39049.9	-59.7		
197.8	39277.7	-59.8		
184.0	40785.0	-54.6		
175.2	41814.8	-56.3		
150.0	45070.4	-55.7		
106.8	52094.8	-62.4		
100.0	53437.4	-61.5		
91.0	55366.5	-61.5		
76.0	59118.9	-53.8		
70.0	60851.3	-56.8		
56.8	65144.1	-64.7		
50.0	67782.5	-53.9		
43.4	70776.8	-55.3		
40.8	72084.0	-53.8		
35.2	75220.9	-53.6		
30.0	78652.4	-49.4		
24.4	83151.6	-47.4		

STATION ALTITUDE 4051.00 FEET MSL  
 31 MAR. 61 0918 IRS MST  
 ASCENSION NO. 18

UPPER AIR DATA  
 090003001B  
 JALLEN  
 TABLE 19

GEODETIC COORDINATES  
 33.1671° LAT DEG  
 106.49511 LON IEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND IN KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
4051.0	879.6	13.9	-10.7	17.0	1066.3	660.4	270.0	1.9	1.000250
4500.0	863.4	11.4	-3.9	34.0	1057.2	667.8	286.4	1.6	1.000257
5000.0	849.7	9.8	-5.3	34.0	1044.3	655.9	310.5	1.5	1.000252
5500.0	834.0	8.6	-5.8	35.5	1029.3	644.5	332.7	1.7	1.000248
6000.0	818.5	7.4	-6.4	36.9	1014.6	653.1	323.0	3.1	1.000244
6500.0	803.4	6.2	-6.9	38.3	1000.1	661.7	308.0	4.5	1.000240
7000.0	788.5	5.0	-7.5	39.7	985.0	650.3	291.9	6.3	1.000237
7500.0	774.0	3.8	-8.1	41.1	971.8	648.9	273.5	8.1	1.000233
8000.0	759.6	2.7	-8.8	42.6	958.0	647.5	259.6	10.6	1.000229
8500.0	745.6	1.5	-9.4	44.0	944.4	646.1	252.6	13.8	1.000225
9000.0	731.8	0.3	-10.1	45.4	931.0	644.7	249.4	17.1	1.000222
9500.0	716.1	-7	-11.8	42.3	916.9	643.5	256.5	19.7	1.000217
10000.0	704.5	-1.4	-14.5	36.1	902.3	642.5	264.2	22.6	1.000211
10500.0	691.2	-2.2	-16.6	32.2	887.9	641.5	273.5	26.1	1.000206
11000.0	676.0	-3.0	-18.3	29.5	873.7	640.5	278.7	28.9	1.000202
11500.0	665.1	-3.9	-20.1	26.8	859.8	639.5	282.0	31.1	1.000198
12000.0	652.4	-4.7	-22.0	24.1	846.0	638.5	282.1	32.6	1.000194
12500.0	639.8	-5.5	-22.6	24.4	832.4	637.5	281.5	34.0	1.000191
13000.0	627.5	-6.4	-23.2	24.9	819.0	636.5	278.1	37.1	1.000187
13500.0	615.4	-7.2	-23.7	25.3	805.8	635.4	275.0	39.7	1.000184
14000.0	603.5	-8.1	-24.3	25.8	792.8	634.4	271.0	40.8	1.000181
14500.0	591.7	-9.2	-24.9	26.4	780.5	633.1	267.6	41.7	1.000178
15000.0	580.0	-10.5	-25.6	27.0	768.7	631.6	265.1	42.2	1.000175
15500.0	568.5	-11.7	-26.6	27.7	757.1	630.1	264.1	42.8	1.000172
16000.0	557.2	-13.0	-27.4	28.4	745.7	628.5	264.5	43.3	1.000170
16500.0	546.1	-14.2	-28.3	29.0	734.5	627.0	265.1	42.9	1.000167
17000.0	535.3	-15.5	-29.2	29.7	723.5	625.4	266.1	41.9	1.000164
17500.0	524.7	-16.8	-30.0	30.4	712.6	623.9	266.0	41.7	1.000162
18000.0	514.3	-18.0	-30.9	31.1	702.0	622.4	264.9	42.2	1.000159
18500.0	504.1	-19.3	-31.8	31.7	691.5	620.8	263.1	44.2	1.000156
19000.0	493.9	-20.5	-32.6	32.9	680.0	619.3	261.1	46.9	1.000154
19500.0	482.8	-21.7	-33.2	34.4	670.1	617.6	259.7	49.5	1.000151
20000.0	473.9	-22.9	-33.8	35.9	659.6	616.3	258.5	52.2	1.000149
20500.0	464.2	-24.0	-34.5	36.6	648.8	615.1	258.7	53.3	1.000146
21000.0	454.6	-24.6	-35.2	36.2	637.0	614.3	259.1	54.4	1.000144
21500.0	445.1	-25.5	-36.3	35.6	626.1	613.1	260.0	55.2	1.000141
22000.0	435.8	-26.6	-37.5	34.8	615.8	611.7	260.6	56.1	1.000139
22500.0	426.7	-27.8	-38.7	34.1	605.7	610.3	260.0	57.3	1.000136
23000.0	417.8	-28.9	-39.9	33.4	595.7	609.9	260.4	58.6	1.000134
23500.0	407.0	-30.0	-41.1	32.7	585.7	607.5	259.5	60.2	1.000132

STATION ALTITUDE 4051.00 FEET MSL  
31 MAR. 61 0918 HRS MSL  
ASCENSION NO. 18

UPPER AIR DATA  
0900030018  
JALLEN  
TABLE 19 cont'

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES	AIR DEPOINT CENTIGRADE	REL.HUM. PERCENT	GM/CURIC METER	SOUND NOITS	DIRECTION DEGREES (TN)	WIND DATA KNOTS	INDEX OF REFRACTION
24000.0	400.4	-31.1	-42.3	32.0	576.3	606.1	258.4	61.6	1.000129
24500.0	391.8	-32.3	-43.4	31.9	566.6	604.7	257.1	62.9	1.000127
25000.0	383.3	-33.4	-44.4	31.7	557.0	603.2	256.4	64.0	1.000125
25500.0	375.1	-34.5	-45.5	31.6	547.5	601.8	255.9	65.1	1.000123
26000.0	367.0	-35.6	-46.5	31.5	538.3	600.4	255.3	66.3	1.000120
26500.0	359.0	-36.8	-47.6	31.4	529.2	599.7	254.7	67.7	1.000118
27000.0	351.3	-37.9	-48.6	31.2	520.2	597.5	253.5	68.7	1.000116
27500.0	343.7	-39.1	-49.7	31.1	511.5	596.1	251.7	69.5	1.000114
28000.0	336.2	-40.2	-51.2	29.5**	502.8	594.6	250.0	70.2	1.000112
28500.0	328.7	-41.5	-54.1	23.6**	494.2	593.0	248.4	70.8	1.000110
29000.0	321.4	-42.7	-57.4	17.8**	485.8	591.4	247.6	70.7	1.000108
29500.0	314.9	-43.9	-61.5	12.0**	477.6	589.8	247.3	70.1	1.000106
30000.0	307.2	-45.2	-67.4	6.1**	469.5	588.2	247.5	69.4	1.000105
30500.0	300.4	-46.4	-86.8	.3**	461.5	586.6	248.0	68.5	1.000103
31000.0	293.4	-47.6			453.3	585.0	248.4	69.0	1.000101
31500.0	286.7	-48.8			445.2	583.5	248.7	70.5	1.000099
32000.0	280.0	-50.0			437.3	581.9	248.8	72.3	1.000097
32500.0	273.6	-51.3			429.5	580.3	248.9	74.4	1.000096
33000.0	267.3	-52.5			421.9	578.7	249.3	75.8	1.000094
33500.0	261.1	-53.7			414.4	577.2	249.9	76.2	1.000092
34000.0	255.1	-54.9			407.1	575.6	250.7	76.5	1.000091
34500.0	249.2	-56.0			399.7	574.1	251.8	76.6	1.000089
35000.0	243.2	-56.7			391.5	573.1	252.7	76.7	1.000087
35500.0	237.4	-57.5			383.5	572.2	253.0	76.9	1.000085
36000.0	231.8	-58.2			375.6	571.2	253.1	77.0	1.000084
36500.0	226.3	-58.9			367.9	570.2	252.4	76.4	1.000082
37000.0	220.9	-59.6			360.4	569.3	251.6	75.8	1.000080
37500.0	215.6	-60.0			352.4	568.7	250.9	74.6	1.000078
38000.0	210.4	-59.3			342.7	569.8	250.2	73.4	1.000076
38500.0	205.4	-59.0			334.2	570.1	250.0	72.7	1.000074
39000.0	200.5	-59.6			327.1	569.5	249.8	71.9	1.000073
39500.0	195.7	-59.0			318.4	570.1	249.9	71.0	1.000071
40000.0	191.1	-57.3			308.4	572.4	250.0	70.0	1.000069
40500.0	186.5	-55.6			298.7	574.6	250.5	68.5	1.000067
41000.0	182.1	-55.0			290.8	575.5	250.6	67.0	1.000065
41500.0	177.8	-55.8			285.0	574.4	250.4	66.0	1.000063
42000.0	173.7	-56.3			278.9	573.7	251.0	65.5	1.000062
42500.0	169.6	-56.2			272.2	573.9	251.2	64.9	1.000061
43000.0	165.6	-56.1			265.7	574.0	251.1	64.3	1.000059
43500.0	161.7	-56.0			254.3	574.1	251.1	63.6	1.000058

\*\* AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED, IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL  
31 MAR. 61 0918 IRS MST  
ASCENSION NO. 18

UPPER AIR DATA  
0900030016  
JALLEN

TABLE 19 cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL. HUM. PERCENT	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
44000.0	157.9	-55.9			253.1	574.2	251.1	1.000056
44500.0	154.1	-55.8			247.1	574.3	251.2	1.000055
45000.0	150.5	-55.7			241.1	574.5	251.4	1.000054
45500.0	149.9	-56.1			235.8	573.9	252.1	1.000053
46000.0	143.4	-56.6			230.7	573.3	252.9	1.000051
46500.0	140.0	-57.1			225.7	572.7	250.9	1.000050
47000.0	139.6	-57.5			220.8	572.0	248.7	1.000049
47500.0	133.4	-58.0			216.0	571.4	246.2	1.000048
48000.0	130.2	-58.5			211.3	570.8	243.5	1.000047
48500.0	127.1	-59.0			206.7	570.1	240.9	1.000046
49000.0	124.0	-59.4			202.2	569.5	240.1	1.000045
49500.0	121.1	-59.9			197.8	568.9	241.4	1.000044
50000.0	118.2	-60.4			193.5	568.2	242.6	1.000043
50500.0	115.4	-60.9			189.3	567.6	245.5	1.000042
51000.0	112.6	-61.4			185.2	567.0	248.6	1.000041
51500.0	109.9	-61.8			181.2	566.3	251.3	1.000040
52000.0	107.3	-62.3			177.3	565.7	252.2	1.000039
52500.0	104.7	-62.1			172.8	565.9	253.0	1.000038
53000.0	102.2	-61.8			168.4	566.4	253.7	1.000038
53500.0	99.7	-61.5			164.1	566.8	254.2	1.000037
54000.0	97.3	-61.5			160.1	566.8	254.7	1.000036
54500.0	94.9	-61.5			156.3	566.8	255.0	1.000035
55000.0	92.6	-61.5			152.5	566.8	255.2	1.000034
55500.0	90.4	-61.2			148.6	567.1	255.1	1.000033
56000.0	88.3	-60.2			144.4	566.5	254.1	1.000032
56500.0	86.2	-59.2			140.3	566.8	253.2	1.000031
57000.0	84.1	-58.1			136.3	571.2	252.0	1.000030
57500.0	82.1	-57.1			132.5	572.6	250.7	1.000029
58000.0	80.2	-56.1			128.7	574.0	249.5	1.000028
58500.0	78.3	-55.1			125.1	575.3	248.7	1.000028
59000.0	76.4	-54.0			121.5	576.7	247.7	1.000027
59500.0	74.6	-54.5			118.9	576.1	246.4	1.000026
60000.0	72.9	-55.3			116.6	575.0	244.9	1.000026
60500.0	71.2	-56.2			114.3	573.8	241.4	1.000025
61000.0	69.5	-57.1			112.0	572.7	236.3	1.000025
61500.0	67.8	-58.0			109.8	571.4	227.3	1.000024
62000.0	66.2	-58.9			107.6	570.2	220.7	1.000024
62500.0	64.6	-59.8			105.5	569.0	220.7	1.000023
63000.0	63.0	-60.8			103.4	567.8	220.0	1.000023
63500.0	61.5	-61.7			101.4	566.5	216.4	1.000023

STATION ALTITUDE 4051.0 FEET MSL  
 31 MAR. 81 0918 HRS MST  
 ASCENSION NO. 18

UPPER AIR DATA  
 0900030016

JALLEN

TABLE 19 cont'

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES	REL. HUM. PERCENT	SPEED OF WIND DATA KNOTS DEGREES (TN)	INDEX OF REFRACTION
GEODETIC ALTITUDE MSL FEET	AIR DEGREES	DEGREE	GM/CUBIC METER	KNOTS	
64000.0	60.1	-62.6	99.4	565.3	1.000022
64500.0	58.6	-63.5	97.4	564.1	1.000022
65000.0	57.2	-64.4	95.5	562.8	1.000021
65500.0	55.8	-63.2	92.7	564.4	1.000021
66000.0	54.5	-61.2	89.6	567.2	1.000020
66500.0	53.2	-59.1	86.6	569.9	1.000019
67000.0	51.9	-57.1	83.7	572.6	1.000018
67500.0	50.7	-55.1	81.0	575.3	1.000018
68000.0	49.5	-54.0	78.7	576.7	1.000017
68500.0	48.3	-54.2	76.9	576.4	1.000017
69000.0	47.2	-54.5	75.2	576.1	1.000017
69500.0	46.1	-54.7	73.5	575.8	1.000016
70000.0	45.0	-54.9	71.9	575.5	1.000016
70500.0	44.0	-55.2	70.3	575.2	1.000016
71000.0	42.9	-55.0	68.6	575.3	1.000015
71500.0	41.9	-54.5	66.8	576.1	1.000014
72000.0	41.0	-53.9	65.1	576.9	1.000014
72500.0	40.0	-53.8	63.5	577.0	1.000014
73000.0	39.1	-53.7	62.0	577.1	1.000014
73500.0	38.2	-53.7	60.6	577.1	1.000013
74000.0	37.3	-53.7	59.2	577.1	1.000013
74500.0	36.4	-53.6	57.8	577.2	1.000013
75000.0	35.6	-53.6	56.4	577.2	1.000013
75500.0	34.7	-53.3	55.0	577.7	1.000012
76000.0	33.9	-52.6	53.6	578.5	1.000012
76500.0	33.2	-52.0	52.2	579.3	1.000012
77000.0	32.4	-51.4	50.9	580.1	1.000011
77500.0	31.7	-50.8	49.6	580.9	1.000011
78000.0	30.9	-50.2	48.3	581.7	1.000011
78500.0	30.2	-49.6	47.1	582.5	1.000010
79000.0	29.5	-49.2	45.9	582.9	1.000010
79500.0	28.9	-49.0	44.8	583.2	1.000010
80000.0	28.2	-48.8	43.8	583.5	1.000010
80500.0	27.6	-48.6	42.8	583.8	1.000010
81000.0	26.9	-48.4	41.7	584.1	1.000009
81500.0	26.3	-48.1	40.8	584.4	1.000009
82000.0	25.7	-47.9	39.8	584.7	1.000009
82500.0	25.1	-47.7	38.8	585.0	1.000009
83000.0	24.6	-47.5	37.9	585.3	1.000008

STATION ALTITUDE 4051.00 FEET MSL  
 31 MAR. 81 0918 HRS MST  
 ASCENSION NO. 18

MANDATORY LEVELS  
 0900030018  
 JALLEN  
 TABLE 20

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	TEMPERATURE REF. HUM. PERCENT	WIND DATA	
					PERCENT	DIRECTION DEGREES (TN)
500.0	4907.	9.0	-5.3	34.	309.8	1.5
800.0	6627.	5.9	-7.1	39.	302.8	4.9
750.0	8348.	1.8	-9.2	44.	254.3	12.8
700.0	10160.	-1.7	-15.5	34.	267.6	23.7
650.0	12084.	-4.8	-22.2	24.	282.0	32.8
600.0	14135.	-8.4	-24.4	26.	269.9	41.1
550.0	16328.	-13.8	-26.5	29.	264.8	43.3
500.0	18677.	-19.8	-32.2	32.	262.5	45.2
450.0	21214.	-24.9	-35.6	36.	259.5	54.8
400.0	23988.	-31.2	-42.4	32.	258.3	61.7
350.0	27049.	-38.1	-48.0	31.	253.0	66.8
300.0	30469.	-46.5			248.1	68.5
250.0	34358.	-55.0			251.6	76.5
200.0	38960.	-59.7			249.8	71.9
175.0	41737.	-56.3			250.9	65.7
150.0	44954.	-55.7			251.4	60.0
125.0	48732.	-59.3			239.7	71.9
100.0	53278.	-61.5			254.1	69.1
80.0	57850.	-56.0			249.5	45.5
70.0	60648.	-56.8			238.4	17.8
60.0	63810.	-62.6			231.6	15.9
50.0	67534.	-53.9				
40.0	72222.	-53.8				
30.0	78323.	-49.4				
25.0	82259.	-47.6				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.